BUSINESS EDUCATION forum

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UNITED BUSINESS EDUCATION ASSOCIATION

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BUSINESS EDUCATION forum

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EDITORIAL AND EXECUTIVE OFFICES

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OFFICE STANDARDS FORUM

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Office Production

COMMUNICATION AND COMPUTATION are two important functions of the office and account for much of the volume of work completed by the office employee. Most of this work is of the repetitive nature and therefore it should be reasonable to expect that office production could be easily measured and that standards of production have been established. However conversations with office executives reveal that office production standards are vague and when they do exist they vary with organizations.

The typewriter has been the principal office tool in written communication for three-quarters of a century and volumes have been written about its use. Yet outside of the classroom very little data have been accumulated on which to base standards of production. The scarcity of standards may be attributable to the fact that the variety of work involved in an office makes it difficult to determine what is a normal or average level of production. The setting of standards presupposes that it is possible to ascertain this level. There is evidence that in recent years business organizations which have volumes of communication are attempting to measure typewriting production.

Every office, large or small, must process records and figures at a rapid and accurate rate. Adding and calculating machines are necessary to accomplish this work. Because there are many different classes of these machines, it is necessary to obtain information about standards of production of each machine that is constructed to perform a given kind of computation in order to reach an intelligent decision about what machines are best for a particular need. There are specific studies available that provide a measure of production on the ten-key adding-listing machine and the key-driven calculator.

Classroom business teachers are interested in the standards of production on all types of office machines. They want to measure the level of competency of their students in terms of office production and they want to be sure their students will leave school with employable abilities. Unfortunately the variables that enter into measuring production in the office are such that it is almost impossible to evaluate student performance in terms of standards used by firms in their office operations. Some value may accrue from these standards if the teacher recognizes their limitations and uses them only as suggested guides and as a motivation device.

—WILSON ASHBY, *Issue Editor*

The FORUM

The application of office skills vary to such an extent that business and business educators alike have failed in many instances to establish standards. However, there are some basic skills which can be measured rather easily. The contributors to the Feature Section (pages 7-19) share with us some data they have compiled on work measurement.

The theme "Office Standards" is carried over into several articles included in the Services Section (pages 23-29). Leading business educators now advocate raising standards in the skills subjects while at the same time shortening the learning period. To accomplish this becomes one of the vital issues in business education today and certainly teachers will want to read what others are doing about it.

The spring months are such busy ones for business educators that there is never enough space in the In Action Section (pages 31-34) to report all the events that are taking place. However, you will want to read about important events such as a special three-week summer workshop, the 1960-61 UBEA officers, achieving the UBEA membership goal, the White House Conference, and many other items reported in this section.

The more than 2200 FBLA chapters provide an outlet for some of the best leadership experiences and public relations activities that the business department can produce. Fifty thousand young adults are working for excellence in business education through FBLA. The public relations values of their activities within the communities are extremely valuable. The FBLA Forum (pages 35-36) reports a few of the activities which could be adapted for use by an FBLA chapter in your school.

This issue of the FORUM marks the end of an outstanding year of publication. As each issue was made ready for the press, the staff worked toward improvement of the new format adopted at the beginning of the year. Attempts were made to publish the best business education articles in the most attractive and readable form possible. The addition of a General Services Section this year allowed a greater freedom in the selection of articles for the FORUM; it has proven to be successful. The Headquarters Notes was inserted this year in copies of the FORUM mailed to UBEA members. The type of informal communication supplied by the Notes has filled the "missing link" in the publications program. These and other innovations this year are to be continued in 1960-61 with added improvements.

The topic of "Testing and Evaluation in Business Education" has been selected for the January 1961 special issue of the FORUM. The editors are already at work on the material to be included in this issue which should prove to be just as good and equally as important as the special curriculum issue of January 1960.

FORUM readers are invited to write to the editorial staff at any time concerning the articles and association activities. The sole purpose of the FORUM is to serve you, the business educator.—*D.C.C.*

Editor: Office Standards Forum
WILSON ASHBY
University of Alabama
University, Alabama

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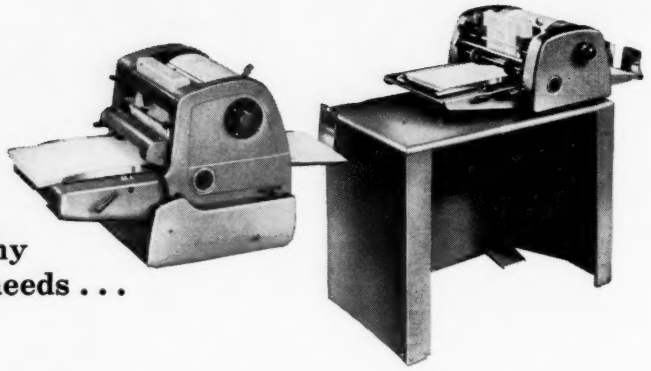

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THE forum

The Development of Standards for the Key-Driven Calculator

by **MARY MARGARET BRADY**
Southern Illinois University, Alton, Illinois

When considering the question of production and standards for the operation of the key-driven calculator, there are three avenues of approach, distinguished by the amount of time devoted to machine instruction, leading to a minimum of three different sets of standards. Standards have a special significance for the key-driven calculator because it is a machine on which the speed of operation is dependent upon the skill of the operator and not upon the revolutions of a motor. Thus, standards for the key-driven calculator should be distinguished from those for the rotary calculator.

Approaches to Teaching

The first avenue of approach leads to the very short period of training on the calculator, ranging from 10 to 30 to perhaps 60 hours of instruction. Such training is usually found in conjunction with a course in office machines, office or clerical practice, and in high schools, junior colleges, colleges, and universities. Such a period of training results in an acquaintanceship knowledge and a very limited skill in machine operation. The development of correct operational techniques and the ability to perform the four arithmetical processes, without the development of any measurable skill, may prove valuable to the clerical student for many offices hire only partially trained or sometimes wholly untrained operators.

For these short courses, the establishment of standards is not advisable. The limited time should be devoted to the development of correct operational techniques rather than to measurement of skill. The establishment of attainable standards would be deceptive for they would of necessity be so low that they would have no significance on an occupational level. However, the elimination of standards does not mean that the student should not compete with himself to improve his skill in the time available. Some techniques which can be used advantageously in the short training period are listed below:

1. Provide variety in drill work. Students often develop a dislike for the key-driven calculator because they spend an entire practice period trying to get the right answers to long columns of figures. Teach the four processes early to give variety and to allow adequate time for review, especially of division. Use practice materials which simulate business papers such as sample checks, invoices, and payroll records. Do not insist on accuracy—it is impossible to achieve in the initial learning period.

2. Give many one-, two-, and three-minute timings, particularly in addition and multiplication. Have the student keep a record of how many problems he completes each time so that he may compete with his own record. Give timings on adding amounts from checks and sales slips, including instructions for the handling of the papers. While complete accuracy should not be stressed, the recording of the errors along with the rate will remind the student that eventually accuracy must be attained. Even though no goals of achievement have been established, the student will be motivated by watching his own improvement from day to day. By keeping records, the teacher will be able eventually to set some reasonable goals on the material used.

3. Discuss and demonstrate the type of calculations for which the key-driven machine is most effective. Have a skilled operator visit the class to demonstrate. Students will be amazed at the speed with which the machine can be operated.

4. Visit a business office where a battery of key-driven calculators is used or where a few machines are used on a full-time basis. Either a dairy or a bakery often makes

use of the pegboard in connection with machine operation. Such a visit will help the student appreciate the possibilities of the key-driven in the hands of skilled operators.

5. Emphasize the need for writing legible figures when recording answers.

In institutions of higher learning, students studying the key-driven calculator are probably not planning to enter offices as operators, but rather plan to teach the machine in high school or college. Those who do enter offices are interested in ultimately reaching an executive type of position. For such students, an operational knowledge of the machine is still necessary, but emphasis should be placed upon the selection and utilization of the various types of adding and calculating machines so the comparative advantages of each type can be determined according to the nature of the work to be performed and the kinds of figures involved.

The second avenue of approach is found in those schools where the course on the key-driven calculator is extended from 90 hours up to approximately 150 hours. In this period of time a rather high degree of operational skill can be developed. Such courses are found in private business colleges, technical institutes, vocational high schools, and junior colleges. These courses produce a semi-skilled operator who is able to perform successfully in most offices. In such courses, standards should be developed according to the length of the course.

In such a course, many timings on the arithmetical processes should be given, accuracy should be stressed toward the latter part of the course, and extensive practice should be provided from business papers. Attention should be given to the development of peripheral skills such as the handling of both large and small sheets of paper, the reading of handwritten figures, the assembling of papers from which information is to be obtained, and the preparation of material in the student's own handwriting which he must then read in machine calculation.

The third avenue of approach leads to the development of a highly skilled operator whose training period covers from 250 to 300 hours. Such courses are found almost exclusively in schools operated by machine manufacturing companies. A few business colleges give such courses. Company schools have established high standards of performance in the four arithmetical processes for completion of the course. While these high standards are commendable for a long course, they must be used only as patterns and reduced as the length of time devoted to training is shortened. Some of these company schools have experimented with the establishment of lower standards for shorter courses.

Establishment of Standards

Standards of achievement are now usually expressed in terms of the number of problems completed in a given period of time. For example, a standard in addition is described as follows:

Seventy columns added in one hour
Each column consists of 30 five-digit figures
Length of timing, 30 minutes
Multiply result by 2 to express standard in terms of one hour
100 percent accuracy required.

A multiplication standard is expressed as follows:

Ninety multiplications in 10 minutes
Four- to five-digit figures in multiplicand and multiplier
Length of timing, five minutes
Multiply result by 2 to express standard
in terms of 10 minutes
100 percent accuracy required.

The use of a number-stroke count, similar to a letter stroke count for typewriting, would simplify the expression of standards. With such a stroke count, a standard could be expressed as follows:

Strokes a minute
Percent of accuracy required
Length of timing.

While any copy can be given a stroke count by counting the digits, specially prepared copy is preferable. In such copy, each problem should contain the same number of strokes, thus making the calculation of strokes a minute very simple. The following paragraphs describe how to determine a stroke count for each of the arithmetical processes and give examples of counted material.

Addition

Copy for addition is usually arranged in columns of three- to five-digit figures. Each of these columns might contain 50 or 60 strokes. Preferably the columns should be the same length, both in stroke count and in number of figures. Digits from 1 through 5 count as one stroke; digits from 6 through 9 count as two strokes since it takes two key depressions to make them. Ciphers do not give a stroke count.

Assume that a three-minute timing is given over the following material. The student completes six columns. For ease in computation, if a column is over one-half completed when the timing bell rings, the student is allowed to complete it; otherwise, partially added columns should be disregarded.

Each of the following problems contains 50 strokes. The student's score would be 300 strokes, or 100 strokes a minute. The number of errors should be recorded

(1)	(2)	(3)	(4)	(5)
8.00	68.00	43.70	6.35	51.15
66.51	81.10	46.30	78.34	50.90
.09	94.48	8.44	.06	88.76
.17	6.09	7.78	14.85	7.49
94.35	83.50	9.47	.96	51.25
2.43	95.80	.30	13.40	9.10
7.79	2.99	49.35	57.25	25.72
11.62	4.79	12.69	4.55	8.81
4.11	.57	78.10	2.78	86.00
35.86	3.95	20.34	8.40	1.10
.52	48.25	1.80	79.52	7.29
75.78	2.00	4.85	2.95	.34
307.23	491.52	283.12	269.41	387.91

(6)	(7)	(8)	(9)	(10)
14.30	50.40	5.05	5.34	8.58
.76	1.25	8.90	1.52	26.23
.27	67.45	7.31	17.84	1.37
8.88	75.14	67.70	21.68	.67
.05	9.92	8.29	1.20	22.51
.61	68.10	97.81	25.85	.77
64.32	20.87	12.20	.99	63.67
70.94	5.08	27.00	.44	.32
7.90	56.00	14.95	9.45	2.27
73.64	45.19	37.00	71.84	8.68
95.46	2.85	6.78	2.81	12.52
6.31	68.00	.31	1.67	.40
343.44	470.25	293.30	160.63	147.99

along with the speed on a chart so that the score can be compared with that made on other tests. As the course progresses, columns with more figures and more digits to the figure should be used.

Multiplication

To establish a stroke count for multiplication problems, add the value of the digits in the multiplicand; for example, the multiplicand, 2846, would have 20 strokes. It is true that some multipliers are easier to hold than others, which will affect somewhat the speed of multiplication, but this same situation is true in the typewriting of words. As long as the multiplier can be held at one time by using either one or both hands, it will not affect the stroke count. In multiplication tests a student may be allowed to complete the problem upon which he is working when the bell rings.

Assume that a three-minute multiplication timing is given over the following material. The student completes 12 problems. Each problem contains 20 strokes.

1. 26.66 x 68.60 (1828.876)
2. 9.173 x 15.54 (142.54842)
3. 42.86 x 72.74 (3117.6364)
4. 56.54 x 8.93 (504.9022)
5. 9.362 x 86.33 (808.22146)
6. 2.927 x 36.92 (108.06484)
7. 53.48 x 85.23 (4558.1004)
8. 17.66 x 15.54 (274.4364)
9. 85.16 x 36.38 (3098.1208)
10. 70.85 x 54.15 (3836.5275)
11. 6.905 x 24.77 (171.03685)
12. 8.237 x 55.73 (459.04801)
13. 69.23 x 43.85 (3035.7355)
14. 33.95 x 38.27 (1299.2665)
15. 18.56 x 58.34 (1082.7904)

The student's score would be 240 strokes, or 80 strokes a minute.

Multiplication timings with decimals should be multiplied over a fixed or permanent decimal point. Some of the tests should include numbers with simple common fractions, hundreds, and thousands.

Subtraction

The stroke count for subtraction is determined by adding the key depressions for the minuend and subtrahend. For the minuend the stroke count is the same as for addition, one stroke for numbers 1 through 5 and two strokes for numbers 6 through 9. A minuend of 2981 would have six strokes. In determining the stroke count for the subtrahend, each number counts as one stroke from 0 through 8. The number 9 does not give a stroke count. A subtrahend of 808 would have three strokes (807); 420 would have two strokes (419). On some makes of key-driven calculators where it is necessary to borrow when subtracting, one additional stroke would be added to the problems. The stroke count in the following problems contains the borrowing stroke.

Assume that a three-minute subtraction timing is given over the following material. The student completes 18 problems. Each problem contains 10 strokes.

1. 87.61	4. 58.92	7. 52.86	10. 94.88
2.28	24.47	32.41	6.11
85.33	34.45	20.45	88.77
2. 79.86	5. 63.68	8. 72.48	11. 83.16
19.30	4.82	70.11	15.31
60.56	58.86	2.37	67.85
3. 96.67	6. 36.76	9. 78.76	12. 76.68
7.93	6.04	9.05	43.00
88.74	30.72	69 71	33.68
13. 61.27	16. 46.88	19. 16.99	22. 75.77
33.14	19.49	6.13	3.18
28.13	27.39	10.86	72.59
14. 52.79	17. 69.57	20. 97.68	23. 63.74
23.19	8.21	5.40	22.01
29.60	61.36	92.28	41.73
15. 68.91	18. 26.49	21. 87.91	24. 98.67
11.96	17.26	4.13	1.70
56.95	9.23	83.78	96.97

The student's score would be 180 strokes, or 60 strokes a minute. Since subtraction is performed less frequently than the other processes, it need not be given as much emphasis in timing.

Division

To obtain a stroke count in division, the figures in the dividend and quotient are used. The figures in the dividend are counted the same as in addition. The actual value of the digits in the quotient are then added to the number of figures in the dividend to get the total stroke count. In order to determine an exact stroke count, the problem must come out even when divided.

For example: $1169.67 \div 921 = 127$

The dividend, 1169.67, has 10 strokes. The quotient, 127, adds to 10, making a total of 20 strokes for the problem.

$$315.12 \div 404 = 78$$

The dividend, 315.12, has 5 strokes. The quotient, 78, has 15 strokes, making a total of 20 strokes.

Standards are valuable as both measuring and motivating devices.

Assume that a three-minute division timing is given over the following material. The student completes 11 problems. Each problem contains 20 strokes.

1.	697.88	÷	956	=	.73
2.	1169.67	÷	921	=	1.27
3.	98.766	÷	8.37	=	11.8
4.	678.96	÷	82.8	=	8.2
5.	797.86	÷	.973	=	820.
6.	669.76	÷	7.36	=	91.
7.	786.98	÷	722.	=	1.09
8.	79.886	÷	.0677	=	1180.
9.	116.967	÷	9.21	=	12.7
10.	96696.	÷	.711	=	136000
11.	149.688	÷	97.2	=	1.54
12.	1616.96	÷	.992	=	1630.
13.	15.7896	÷	9.18	=	1.72
14.	1771.99	÷	97.9	=	18.1
15.	698.88	÷	.0336	=	20800.
16.	1186.99	÷	547.	=	2.17
17.	187.765	÷	7.99	=	23.5
18.	1978.84	÷	.811	=	2440.
19.	149.776	÷	.592	=	253.
20.	898.66	÷	343.	=	2.62

The student's score would be 220 strokes, or 73 strokes a minute. Division is performed more frequently than subtraction. While a student will probably not develop a high skill in division in a short course, he should learn how to perform it accurately.

Examples of Currently Established Standards

The graduation standards for a 250- to 300-hour course in a school operated by a machine-manufacturing company are described as follows:[1]

Addition: 30-minute timings expressed in terms of one hour
Requirement: 70 columns of 30 five-digit figures an hour

Multiplication: 5-minute timings expressed in terms of 10 minutes
Requirement: 90 problems of four- and five-digit figures in 10 minutes
Problems include common fractions, decimals, hundreds, thousands, dozen, gross, ton

Subtraction: 5-minute timings expressed in terms of 10 minutes
Requirement: 80 problems with four- and five-digit figures in 10 minutes

Division: 10-minute timings
Requirement: 30 problems of four- and five-digit figures with three decimals in the quotient in 10 minutes.

Thumbing exercises are given for one minute on sales checks and bank checks with digits in figures varying from two to five. No established standards for the number added.

Progressive tests are given throughout the course so that the student has a series of goals to reach. All work is individual so there is a variation in the number of hours required to complete the course.

A junior college which offers a 90-hour course on the key-driven calculator uses the following standards:[2]

Addition: 10-minute timings expressed in terms of one hour
Requirement: 70 columns of 20 three-to-five digit figures an hour.

Multiplication: 10-minute timings expressed in terms of one hour
Requirement: 300 problems with three- and four-digit figures an hour
Problems include common fractions, decimals, hundreds, and thousands.

Subtraction: 10-minute timings expressed in terms of one hour
Requirement: 400 problems with three- and four-digit figures an hour.

Division: 10-minute timings expressed in terms of one hour
Requirement: 200 problems with three- to five-digit figures, with three to four decimals in the quotient.

90 percent accuracy is required for all processes.

One school has indicated three levels of standards for all work included in its office machine and clerical course. Those for the key-driven calculator are:[3]

ACQUAINTANCESHIP

Addition: 50 digits a minute for 10 minutes
Subtraction: 40 three- to five-digit problems, 10 minutes
Multiplication: 30 three- to five-digit problems, 10 minutes
Division: 20 two- to four-digit problems, 10 minutes.

SEMI-PROFICIENCY

Addition: 75 digits a minute for 10 minutes
Subtraction: 60 three- to five-digit problems, 10 minutes
Multiplication: 50 three- to five-digit problems, 10 minutes
Division: 40 two- to four-digit problems, 10 minutes.

PROFICIENCY

Addition: 100 digits a minute for 10 minutes
Subtraction: 80 three- to five-digit problems, 10 minutes
Multiplication: 70 three- to five-digit problems, 10 minutes
Division: 60 two- to four-digit problems, 10 minutes.

All timings require 100 percent accuracy.

Another high school which includes the key-driven calculator as a part of a one-year office machines course uses the following standards:[4]

75 net strokes a minute	Fair
100 net strokes a minute	Good
120 net strokes a minute	Superior

Variable Standards

Standards for the key-driven calculator are variable factors in both business and school. In business, production records are frequently based upon pieces of paper processed, with variation in the work required on individual papers, rather than upon a required number of problems in the arithmetical processes. In schools the amount of time devoted to machine training varies so that it is difficult to establish standards which apply to all schools. However, standards are valuable as both measuring and motivating devices. Through keeping records of performance on selected materials, it is possible to establish suggested standards to serve as guides in performance and to provide incentive to students.

[1]Comptometer School, St. Louis, Missouri.

[2]East Los Angeles Junior College, Los Angeles, California.

[3]Vaughn, Lovell A. "We Give Office Machines Students Two Grades." *Business Education World* 40: 18-19; October 1959.

[4]Hadley Technical High School, St. Louis, Missouri.

Standards for Office Operations Involving the Use of the Typewriter

by **IROL WHITMORE BALSLEY**
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Classroom teachers are interested in knowing the production standards that have been set up by business firms for their office operations involving the use of the typewriter. The primary reasons for this interest are twofold: (a) they hope to be able to measure the level of competency of their students in terms of office production, and (b) they want to establish course standards that will insure their graduates having employable skills. Teachers, naturally, think of expressing production in terms of rates—on a words-a-minute basis (such as 50 WAM) or on a number-of-units basis (such as number of invoices typewritten and stencils prepared an hour).

The setting of standards presupposes some attempt to determine what level of production is normal or average. Unfortunately for teachers, so many variables enter into the process of measuring production in offices that it is almost impossible to evaluate student performance in terms of standards set up by firms for their own office operations. Perhaps a discussion of those variables will enable teachers to make a better interpretation of office standards and to recognize the limitations of those office standards as a measuring stick of their own students' competencies.

Variables Influencing the Setting of Standards

Six major variables may be worthy of mention as influencing the level of production that may be set as standard by business firms.

VARIABLE 1—*The Method of Work Measurement.* Any one of several different techniques may be used for work measurement, depending upon such factors as the type of operation being checked, the time and funds available for the study, the use to be made of the findings, and the preferences and training of those who are to do the measuring.[1] The production rate ascertained for a particular operation by one method will not in all likelihood be the same as that determined by a different method. A brief discussion of various methods will reveal why various methods may not yield identical results.

a. Production Records. Such records may reveal the number of pieces of work of a specified type handled in a day, a week, or a month. A study of these records coupled with the opinions of supervisors as to their reasonableness may yield a workable set of standards for an operation. This method is simple but has, of course, the dangers of perpetuating "built-in" inefficiency of certain work procedures. It does give a general measure of output that is useful for many purposes.

b. Production Estimates. Sometimes workers or supervisors may be asked to estimate the time required for certain operations. In some instances, this estimate is little more than a "considered guess" of an experienced operator as he thinks over his past production. In other instances, a rough-estimate record may be kept for a specified period of time in which the major items of work are noted to the nearest half hour or other selected period of time. If the person doing the estimating is a competent, objective worker, the production figures may be entirely satisfactory for the uses to which they are to be put by management. Like production records, they do not yield any detailed data.

c. Employee Work Diaries. This method of measuring output requires careful, conscientious recording of all activities—including rest periods, lunch hour, and coffee break. During the testing period each employee keeps a written record of each operation—when performed, how many times completed, and the specific amount of time spent for each performance. The data thus collected are tabulated and analyzed to yield a time or unit measure for each operation.

d. Sampling of Work. By making frequent checks on the activities in which an employee is engaged during the day, over a period of time an analyst can get a fairly accurate picture of the amount of time spent by the employee on each particular operation. This method of work measurement is probably not especially suited to operations involving the use of the typewriter because of the details inherent in these operations. Work sampling might, for instance, reveal the percentage of a day's time spent in typewriting as compared with other activities; but it would not distinguish amounts of time

[1]There is an excellent discussion of methods of work measurement in Grillo, Elmer V., and Berg, C. J., Jr. *Work Measurement in the Office.* New York: McGraw-Hill Book Company, Inc., 1959. p. 43-127.

By using a stop watch, an analyst can time the separate elements of which an operation is composed.

spent on individual operations in which the typewriting varied in difficulty.

e. Stop-Watch Analysis. By using a stop watch, an analyst can time the separate elements of which an operation is composed. This type of measurement yields more exact data than the preceding methods. In fact, it often reveals inefficiencies hitherto undetected that may result in changes in procedures before standards are set. When the operation itself is timed exclusive of all other factors (such as interruptions and allowances for fatigue and personal needs), then there must be a leveling or adjusting of work pace in setting standards of production. In operations that have considerable variation, the stop-watch technique may not be practicable because of the extended timings that would be necessary to obtain adequate data for each and every element.

f. Micromotion Study. Extremely detailed analysis of performance of an operation can be made through the use of film. This method of measurement is expensive and requires considerable equipment, but it does permit minute study of operations. The most exact timing of each small work segment is possible. As with stop-watch analysis — only to a greater degree — the information gleaned through this method of observation can form the basis for improving ways of performing an operation as well as providing specific production figures.

Through stop-watch analysis or micromotion study, predetermined time standards can be set up for common elements in various operations. The establishment of predetermined time standards makes it possible for analysts to determine the amount of time it should take for a new operation without the operation actually being performed. In operations involving the typewriter, for instance, many elements are similar, such as assembling stationery, inserting paper in the machine, making machine adjustments, erasing and correcting, making a keystroke, removing paper from the machine and disassembling papers. When standard times are developed for common elements, then these standard data can be utilized to determine production time simply by adding together the times for all of the parts of which an operation is composed (usually adding an allowance for personal needs and fatique).

VARIABLE 2—*Purpose for Which Standard Is To Be Set.* The use that is to be made of a standard may be a factor in setting a production level for it. Standards may be used as the basis for initial employment, for salary increases, for wage incentives, for promotions to higher level positions, for job classifications, for hourly pay rates, for predetermining staff needs, for scheduling work loads, for estimating savings from methods change, for cost analysis, for evaulating the best method or equipment for use in a clerical operation.

If standards are used for a wage incentive plan, for example, the point at which the plan begins to function is a basic factor in the standard set. A bonus plan may begin at 50 percent of day-work expectancy, or at 101 percent, or at some other point. It may be set at a point

Among the major variables to be considered in work-measurement to establish standards, is the skill of the employees being measured.

where 70 percent of the employees can be expected to exceed it and thus participate in the incentive rewards.

If a standard is to be used for selection in initial employment, the production level used for it will not be as high as one used for promotions, salary increases, or estimating the time required for experienced personnel to handle peak loads.

The purpose for which a standard is set, then, is a determining factor in the level of production chosen for it.

VARIABLE 3—*Elements Included in the Operation.* The inclusiveness of the elements measured as being part of the operation is a vital factor in measuring production. Make-ready and clean-up elements are regarded as legitimate parts of an operation and are included in determining a production rate in some analyses. In others, they are excluded. The measurement technique that includes all elements will yield a production rate considerably lower than another measurement of the same type of operation in which the elements considered are limited.

The actual differences in seemingly identical operations may also be of significance in production figures. For example, the operation of typewriting an invoice might be considerably more involved in one firm's office than in another. In Firm A the typist might average 10 positionings and a total of 150 strokes an invoice. In Firm B, 30 positionings and a total of 350 strokes an invoice might be typical. Obviously, the production time expressed in terms of invoices typed an hour would be much less for the typist in Firm B than the one in Firm A.

The difficulty of the source document is another factor of importance in work measurement. Typewriting a report from illegible longhand would be much slower than typewriting from fairly "clean" typewritten rough draft.

The number of copies to be produced would be another vital factor in the determination of production rates. Typewriting six copies would consume more time than typewriting two copies. The use of precollated forms

instead of individually assembled carbon packs would also affect the production rate.

VARIABLE 4—*Skill of Employees Whose Production Is Measured.* This factor may be significant, especially if the number of employees whose production is measured is small. Also, if the employees happen to be persons with little training, experience, or ability, their output may be below the average for persons with more training doing similar work in other firms.

VARIABLE 5—*Number of Employees Whose Output Is Measured.* In some firms only a few employees perform a specific type of operation. When that is the case, the standards set might not be at all typical of production levels achieved on similar operations in other firms or in the levels that would be achieved if additional employees were hired in that same firm.

VARIABLE 6—*Number of Times Operation Is Measured.* Generally speaking, the greater the number of times the operation is measured the more likely it is that a "typical time" for that operation will evolve.

The preceding discussion of six of the variables that influence the determining of production rates and the subsequent setting of standards points up the difficulty of interpreting office standards that exist and of making any comparisons of productivity among employees of different firms or between the employees of a firm and students in the classroom. This statement does not mean that studies of standards or comparisons based on them are futile, but it does suggest the limitations of such comparisons and the wisdom of knowing the background of work measurement that led to the development of a specific set of standards.

Examples of Analyses of Operations

Breakdowns of operations into their elements and the timing of those elements can be valuable to both firms and to classroom teachers. The business firm may become more interested in increasing the efficiency of its office procedures and may have a greater appreciation of why certain tasks that seem simple actually involve considerable time and skill on the part of the operator. The teacher may gain a greater awareness of the importance of periphery skills and pay more attention to them and to organization of work and working materials in the classroom than ever before.

Such detailed analyses will also reveal the fallacy of speaking of the time needed to complete an operation in terms of words a minute when the typewriting element consumes only, say, 40 or 50 percent of the total time. A few illustrations of common office operations will serve to clarify these statements.

Operation: Type Premium Notice[2]

Method, equipment, and so on: Renewal accounting cards, approximately 6" x 6" size are placed in a holder in front of the typist. Typist turns cards down as she scans each one to determine if premium is due. In cases where premium is due, typist picks up collated notice and receipt from stack of these forms at her left, places forms in typewriter and positions forms to first typing line. Reading from the accounting card, typist types policy number, date due and amount of premium on the first line of the form. If a reduction dividend is due and payable with this notice, the typist types in the amount of the dividend underneath the premium (2nd line) and the net amount due on the 3rd line. Then she positions notice at the address position and types address. Forms are removed from the typewriter, carbon shaken out into basket on floor at left and the two forms placed in two piles at left. A standard typewriter is used.

Element	*Time Element*	*Frequency*	*Operation Time (Minutes)*
1. Pick up forms, insert in typewriter, remove, set aside at finish.	.18	(1/1)	.18
2. Type top line—Pol. No. (6 char.) tab to date due (5 char.) tab to premium (5 char.)	.1304	(1/1)	.13
3. Type reduction dividend (4 char.) net amount due (5 char.)	.0931	(1/4)	.023
4. Type insured's name and address, ave. 40 char.	.236	(1/1)	.236
5. Group Constant			
A. Replace completed tray of accounting cards in files; get next tray	.52		
Replace cards in file, get next group	.50		
	1.02	(1/750)	.0014
B. Take completed forms to table; mark work-count on record	.32		
Mark count on record	.50		
	.82	(1/100)	.0082
Total Standard Time			.5786
Allowance for Personal Fatigue and Delay 10 percent			.0579
Total Allowed Time			.6365
		(use)	.64

It will be observed that approximately 30 percent of the time taken to complete the operation of typewriting the premium notice is used for nontypewriting activities.

Another example, addressing envelopes, reveals the many elements in this seemingly simple operation:[3]

Element Description	*Std. Min. an Envelope*
1. Remove set strip from machine	.015
2. Pick up, position, and align envelope in machine	.101
3. Typewrite	.480
4. Aside	.029
5. Clip to order and original	.038
6. Replace set strip in machine	.150
7. Count and record number of envelopes	.030
Total standard min. each envelope	.843
Standard envelopes an hour	72

[2]Adapted from "Typical Times for Clerical Actions," a report of the Eastern Planning Committee of Life Office Management Association, April 22, 1949.

[3]Excerpt from the Standard Data Writeup Manual of a business firm, dated 1957; used by permission.

Breakdowns of operations into their elements and the timing of those elements can be valuable.

In the timing of this operation several elements were included that might not be included in the operation as measured by another firm. Elements 1, 5, 6 and 7 might not be included in the operation as timed by a different firm. If only Steps 2, 3, and 4 were considered in timing the operation, the rate of envelopes typed an hour would be 98.

The same firm gives an element description of invoice typewriting as follows:

Element Description	*Std. Min. an Invoice*
1. Pick up pile, sort plant #1 from plant #2, count plant #2 at the same time, record count on work sheet (before processing) (10.90 1/333)	.033
2. Pick up and insert in typewriter	.089
3. Type (.0082 × 36 = .295)	.295
4. Remove from typewriter, remove carbons, aside to desk	.076
5. Forward to comptometer operator (30′ round trip) (.241 1/150)	.002
Total Standard Minutes each Invoice	.495
Standard Invoices an Hour	125

Only 60 per cent of the total time on each invoice was spent in actual typewriting. Thus, the elements other than keystroking in the operation are shown to play a significant part in the total time consumed.

Difficulty of the source document from which an operation involving the typewriter is executed was mentioned earlier as a factor that would affect production rate. The excerpt given here from one firm's standard time manual gives an idea of how that firm attacked the problem of controlling the element of difficulty of source document in setting up its standards.[4]

TYPEWRITING CLASS DESCRIPTIONS

	Source Classification		
	Straight Copy	*Good Source*	*Poor Source*
Copy Classification	from typed or printed source	Easily legible longhand, shorthand, corrected copy of familiar machine dictation	Questionable longhand, corrected copy or unfamiliar machine dictation
Rough Draft of Prose		Class I	Class II
Rough Draft of Partially Tabulated Copy Finished Prose	Class I	Class II	Class III

In all, the company has six typewriting class descriptions. Each class of typewriting operation has been broken down into elements and timed. A partial illustration of the breakdown for a Class I operation is shown here.

[4]This firm requested that it not be identified.

TYPEWRITE—CLASS I

Pica Type—
Based on:

1. Full page = 54 lines on 8½″ x 11″ sheet
2. Full line = 6½″ x 11 strokes per inch = 65 strokes
3. Full page = 54 lines x 65 strokes = 3500 strokes

Normal Minutes for Each Full Page—Single Spaced

Symbol	*Operation*	*Freq.*	*Normal Minutes Unit*	*Total*
One Copy				
A	Obtain Paper	1	.02	.02
C	Insert in typewriter	1	.15	.15
F	Typewrite			
	(a) Keystroke	3500		
	(b) Independent Capital	54		
	(c) Return Carriage			
D	Make corrections			
E	Remove fr			
G				

Each Additional Copy				
A	Obtain paper	1	.01	.01
B	Obtain carbon	1		
C	Assemble in typewriter			
D	Make correc			
E	Re			

Notice that about 28 percent of the time consumed when one copy is made is for nontypewriting elements; notice, too, the time required for a correction, for proofreading, and for additional copies.

After the firm had determined the time required for each class of typewriting operation for pica type and for elite type according to the fullness of the page, a chart was set up summarizing the data. These data could then be referred to for such purposes as determining how long it should take to handle a certain work load or a specific operation. Here is an excerpt of the chart:

Pica Type
Normal Minutes for 8½″ x 11″ Single-Spaced Typed Page

Fullness-Strokes-	Full 3500	3/4 2600	1/2 1750	1/4 875	1/10 350	1/20 175	Full 3500	3/4 2600	1/2 1750	1/4 875	1/10 350	1/20 175
Copies												
1	14	11	7	4	2	1	19	14	10	5	2	1
2	15	11	8	4	2	1	20	15	10	5	3	2

This company's standard time manual has a synthesis by degree of difficulty for all six classes of typewriting

operations for both pica and elite type. To the standard data given in the manual for each element of an operation, the company adds allowances for personal needs and fatigue applicable to the particular location—usually about 15 percent.

Some Sample Standards

Even though standards may have only limited value because the method of measurement by which they were derived is unknown or because the elements included in the operation are unknown, still it is interesting to learn something of the standards that have been set up by some business firms. The data presented below were obtained in the summer of 1959 from seven firms. Of these seven, two were in the insurance field; one, mail order; one, steel manufacturing; one, petroleum refining; one, banking; and one, utilities. As to geographical location, three were in Michigan; one, Texas; two, Pennsylvania, and one, Connecticut. All but one of these firms preferred not to be identified; hence, they will be referred to by a letter designation.

The information requested from these firms was limited; therefore, the omissions mentioned in each case are not to be interpreted as criticisms of the company responses but rather as points for the reader to keep in mind as he studies the information presented.

A listing is given of the standards reported for each type of office operation for which information was furnished by one or more of the seven firms, followed by a few comments.

TRANSCRIBING FROM SHORTHAND

Firm	*Standard*	*Use and How Measured*
D	80-100 WAM with relatively high degree of accuracy	initial employment, promotion to higher position; measured formally
E	100 WAM dictation; 45 WAM transcription	initial employment; measured formally

Firm D gave no transcribing rate and no explanation of the dictation rate. It reported that the basis of measurement was a test. There was no explanation of length of test or degree of accuracy of transcript required.

The high transcription rate listed by Firm E would indicate that the rate might be computed on the complete transcript whether mailable or not or possibly that manuscript form was used for the transcript.

Firm C wrote, "The transcription standard for stenographers is difficult to arrive at since we have four different classifications for stenographer-secretaries based on the relative responsibilities of the jobs and we would expect somewhat different performance from each."

Firm A stated that its production standard was "set by the dictator" and that the basic typewriting skill was 50 WAM or better (no explanation of how computed).

Firm G reported only on standards in the Central Typewriting Section and stated that no transcription from shorthand was performed in that Section and that standards were not used for secretaries.

TRANSCRIBING FROM MACHINE[5]

Firm	*Standard*	*Use and How Measured*
A	27-28½ cylinders a day	initial employment, increase in salary, job classification, promotion to higher position; measured formally
B	Std. min./letter .5746	bonus pay rate
C	50-60 WAM	----------
E	9 reports/hour	----------
F	143 5½- to 6-inch lines an hour	wage incentives; measured formally
G	8.73 min./letter with 2 carbons	nonfinancial measurement programs, individual incentive plan; measured formally

The basis of measurement for Firm B's standard was a standard minute of .0067 a stroke. The respondent mentioned that the time reported for his firm on this operation and others included a 17½ percent personal fatigue allowance. No other firm indicated whether its standards included such an allowance.

Firm C based its standard on average daily output and mentioned that electric typewriters were used.

Firm E explained that one transcribing disc contained an average of six reports. There was no statement regarding the size of disc used.

Firm F expressed its standards in terms of typed lines. That firm uses a device attached to the typewriter to measure keystrokes, with 240 keystrokes being made per counter revolution.

Firm G also uses a meter for counting keystrokes. The typist records meter counts, which is the basic unit of measure, and adds other units as number of copies and errors, at the completion of each job. The rate given was based on a letter of 210 five-stroke words (counted from beginning of date line to closing notations).

ADDRESSING ENVELOPES

Firm	*Standard*	*Use and How Measured*
C	45 seconds (4 lines; manual typewriter)/envelope	----------
E	72/hour	measured formally
F	120/hour	wage incentives measured formally
G	.528 min./envelope	nonfinancial measurement program, individual incentive plan; measured formally

Average daily output was the basis of measurement for the standard developed by Firm C. The basis of measurement for Firm F was 1.75 minutes per counter revolution of 240 keystrokes.

Firm G's time was the time required to type an envelope of four lines and 19 words, using their standard time per stroke as a basis for computation.

[5]A Government agency gave the following information about standards for a dictating machine transcriber, GS-3: Transcribing investigation reports from cylinders—20 pages a day (as of October 1959).

It is doubtful that a uniform set of standards can be developed for all business firms.

STATISTICAL TYPEWRITING

Firm	*Standard*	*Use and How Measured*
C	14 column tab., 17 lines—30 minutes (manual typewriter)	.....
F	20 counter revolutions an hour	wage incentives; measured formally

The standard for Firm C was based upon average daily output; no statement of number of digits per column was given. With 240 keystrokes per counter revolution, 20 counter revolutions would represent 4800 total strokes an hour for statistical typewriting in Firm F. No designation of number of copies was made. Firm A stated that the production standard for statistical typewriting varied according to the nature of the work and that there was considerable variety in its offices.

MANUSCRIPT TYPEWRITING[6]

Firm	*Standard*	*Use and How Measured*
C	50 WAM (manual typewriter)	.....
D	50 WAM with a relatively high degree of accuracy	initial employment; promotion to higher position; measured formally
E	45 WAM	initial employment; measured formally
F	50 counter revolutions an hour	wage incentives; measured formally
G	11.11 min./page	.....

The standard given for Firm C was based on average daily output. The basis of measurement for the standard of Firm D was testing. "A relatively high degree of accuracy" was not translated into number or percent of error.

At the rate of 50 counter revolutions an hour, Firm F's manuscript typist would have a rate of about 40 words a minute; however, there is no indication of number of copies or type of source document from which the typewriting would be done.

Firm G, using its standard-time formula, supplied a page of manuscript that it said it would expect its typist to type in 11.11 minutes. It was double-spaced with 70-space line and contained about 365 words, which would yield a rate of about 60 words a minute disregarding make-ready, and machine adjustments. Nothing was indicated about carbon copies. The information supplied by the various firms did not indicate the specific basis for measurement, although Firm G's standard seems to have been based on a standard time per keystroke of about .0070.

CARD TYPEWRITING

Firm	*Standard*	*Use and How Measured*
C	45 seconds a card of 4 lines (manual typewriter)	.....
F	72 cards/hour	wage incentives; measured formally
G	1.27 min./card	nonfinancial measurement programs; individual incentive plan; measured formally

[6]A Government agency gave the following information regarding manuscript typewriting by a typist, GS-3: copying from clean copy—10 double-spaced pages an hour; copying from poor copy, 1 double-spaced page in 10 minutes or 1 single-spaced page in 20 minutes.

Firm C's report gave no indication of line length or positionings involved. In stating its standard of 72 cards an hour, Firm F explained that 2.30 minutes per counter revolution was the basis for measurement. No explanation was given of amount or difficulty of typed material.

The sample furnished by Firm G of a card typed in 1.27 minutes was a card requiring 13 positionings, 8 of which were included in 2 columns of 4 names each. The actual number of character keystrokes divided by the time would yield a rate of about 36 words a minute if only the typewriting element were considered.

INVOICES OR STATEMENTS

Firm	*Standard*	*Use and How Measured*
B	Std. min./form .955	bonus pay rate
C	50 WAM (manual typewriter)	.....
E	125 inv./hour	measured formally
G	2.67 min./inv. with 1 carbon	nonfinancial measurement program, individual incentive plan; measured formally

The standard quoted by Firm B was based on a standard minute of .0070 a stroke. There was no indication of the basis of measurement for Firm C's standard. On the surface, there seems to be considerable difference in the standards for Firms E and G. However, the spread may be due partly to the number of positionings and number of character keystrokes required to complete an invoice. The figures would suggest that the invoices handled in Firm E have fewer items than those for Firm G.

The sample invoice provided by Firm G had 23 positionings. There were 120 character keystrokes, 72 of which were figures and symbols. In other words, approximately 80 percent of the keys struck (not counting spacing) were figure or symbol keys.

PUNCHED CARD "TYPEWRITING"

Firm	*Standard*	*Use and How Measured*
A	500 cards a day after 3 months—minimum 1600 cards a day after 12 months—maximum	initial employment, increase in salary, job classification, promotion to higher position; measured formally
C	50-60 WAM (Flexowriter)	.....
E	Std. sheets/hour 32-38	measured formally

Firm A explained that the standard was for statistical punching, all 80 columns used, and both alphabetical and numerical punching performed. The statement was made that the amounts varied according to classification of insurance. The rate given for Firm C was based on average daily output.

ORDER ENTRY

Firm	*Standard*	*Use and How Measured*
B	Std. min./ticket .2096	hourly bonus pay rates
E	60 WAM on ms. typewriting required to qualify as order entry or billing typist	initial employment test; measured formally

The standard for Firm B was based on standard minute of .0070 a stroke. Only one firm reported a

(*Please turn to page* 19)

Standards of Production on the Ten-Key Adding Machine Keyboard

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The ten-key keyboard is becoming the second most important keyboard in business, with only the typewriter keyboard holding a more important position. In addition to the straight ten-key keyboard adding machine, almost all electronic equipment used today is fed numeric information by the use of a ten-key keyboard; banks are currently clearing checks with ten-key keyboard operated proof machines and accounting departments are using more and more ten-key keyboard machines for posting operations. With such a rapid growth in ten-key keyboard operation, detailed standards of performance and production must be developed so that management can receive maximum use of the equipment's potential value.

Current Standards

With the exception of a few large firms which have their own ten-key training programs for beginning employees, little has been done at present to prepare highly skilled ten-key keyboard touch operators or to develop realistic standards of performance and production. During a recent investigation, it was discovered that a large percentage of employees operating ten-key keyboard machines in a variety of business activities were not touch operators and were not required to meet any specific standards. In many firms, former full-key keyboard production standards had been transferred to the ten-key keyboard machines. Such standards are not realistic when the high production potential of the touch operated ten-key keyboard is considered.

In the past, and in many offices today, measurement of basic ten-key operation skills do not exist upon initial hiring of new employees. Measurement for the most part takes place only after the employee has been on the job for an extensive period of time. Standards of performance, when they exist, are usually made on the basis of the amount of work turned out over a period of a day, week, or month with no consideration of the operator's basic ten-key operating skill. Many employers hire an operator, place him on the job for an extensive period, and hope that he will reach the current standard of production without training. The skill develops through the process of continuous repetition with the operator using whatever method of operation desired. Such a trial-and-error procedure with no concern for touch operation is most expensive, for the employer must accept the cost of many errors and must pay for slow production rates for an extensive period. In such situations, production standards are usually much lower than the potential of the ten-key keyboard machine.

A number of business firms with training programs have recently developed problem material for measurement of operator ability during early employment. This is a step in the right direction. Quite often, however, the tests themselves have not been prepared with any particular measurement for length or difficulty and must, therefore, be limited for use to the firm involved. Operator efficiency results cannot be interpreted universally unless the test material and procedures are published and the same materials and procedures used in another firm.

The standard of performance for beginning ten-key touch operators at a large insurance company in New York is 35 three-digit numbers a minute. At the same time, a large banking firm in Baltimore requires 50 three-digit numbers a minute on materials measured for average difficulty as explained later. Without a careful comparison of the two tests and the testing procedures, it is difficult to determine whether one firm is actually requiring a higher standard of performance.

New Measurement Procedures

Until very recently, there has been no consistent basis for measurement of ten-key operators which compares with words a minute and syllabic intensity measurement of the typewriting skill. Three years ago, a major office machines firm investigated the measurement of ten-key keyboard operation as the first step in developing consistent standards of production. When it was discovered that no measurement techniques were available, new procedures were developed and successfully tested. The recommended procedures are explained here.

Problem Length. All clerical skill activities are measured by the number of operations completed in a given period of time. Since time is the controlling factor, the first step in developing a measurement system was to determine the time-consuming elements of ten-key key-

board operation. In the past, the only measurement unit has been the digit with no concern indicated for other operative motions. In developing a new system, it was noted that the motor bar depression and machine cycle was an important time consumer. On all ten-key adding machines evaluated, the time consumed for one motor bar depression was found to be twice that of the depression of one key on the keyboard. Therefore, it was found that the entry of one digit numbers required two-thirds of the time taken with the motor bar depression. When adding a three-digit number, two-fifths of the time was taken for the motor bar depression.

The term "operative unit" was given to each keyboard operation. One operative unit is now counted for each digit entered and two operative units are counted for each motor bar depression. Problem length may, therefore, be computed in the following manner.

PROBLEM LENGTH MEASURED IN OPERATIVE UNITS

Number Entered	*Number of Digits*		*Measurement for Motor Bar Depression*		*Total Operative Units*
.12	2	+	2	=	4
1.23	3	+	2	=	5
12.34	4	+	2	=	6
123.45	5	+	2	=	7
1234.56	6	+	2	=	8
Totals	20	+	10	=	30 OU's in problem

When skilled ten-key touch operators were tested on problems with one-digit numbers and problems with eight digits a number, they entered approximately the same number of operative units a minute. When beginning touch operators were measured on the same materials, it was found that they entered fewer operative units a minute as the number of digits in each line increased. The decline for beginning operators occurred as a result of the increasing number of key location decisions required.

Problem Difficulty. While conducting tests for problem length, speed operators sometimes entered more operative units a minute on one three-digit problem than on another three-digit problem. In many instances, the variation was quite pronounced. Little thought had previously been given to the possibility that some numbers were more difficult to enter on a ten-key keyboard than others because the simplicity of the keyboard had created a feeling that all digits were entered with the same ease and speed. However, when speed operators consistently found some numbers and problems more difficult than others, a more careful analysis was undertaken.

It was discovered that numbers requiring extensive up-and-down finger movement over the keyboard took longer to enter on the keyboard and, therefore, could be said to be more difficult. Extensive testing revealed that operators entered approximately the same number of operative units a minute as long as the problem difficulty remained constant from one problem to another. When problem difficulty varied, the resulting performance varied proportionately.

Procedures for Measurement of Problem Difficulty

Average Difficulty. All problems and numbers are measured by their relationship to average difficulty. Average difficulty is defined as that difficulty which occurs when the fingers move, on the average, from one row of keys on the keyboard to another row of keys with each digit entered in a number. The fingers do not skip a row, nor do they remain on the same row. In the examples given below, the apostrophe indicates finger movement over the middle row of keys.

Number		*Rows Involved*	*Digit Count*	*Row Count*	*Difficulty*
247	—	2 4 7	3	3	1.0 (Av.)
8526	—	8 5 2 6	4	4	1.0
5299	—	5 2 ' 99	4	4	1.0

Above-Average Difficulty. Above-average difficulty involves the mental or physical movement over the middle row of keys during the entry of a number. All rows involved during the entry of a number are counted as part of the operation.

Number	*Rows Involved*	*Digit Count*	*Row Count*	*Difficulty*
281	2 ' 8 ' 1	3	5	1.67
917	9 ' 1 ' 7	3	5	1.67
825	8 ' 2 5	3	4	1.33

Below-Average Difficulty. Below-average difficulty involves numbers requiring that the fingers remain on the same row of keys during a part or all of an entry of a number. Only two numbers on the same row are ever counted together for one row count.

Number	*Rows Involved*	*Digit Count*	*Row Count*	*Difficulty*
225	22 5	3	2	.67
456	45 6	3	2	.67

Cipher in Numbers. Since the cipher is depressed with the thumb or palm on some machines, its entry is not directly involved with the count of the numbers in the upper keyboard. Whenever the cipher appears between two whole numbers, it breaks any count involved between the whole numbers involved. Otherwise, the cipher is counted in the same manner as other keys.

Number	*Rows Involved*	*Digit Count*	*Row Count*	*Difficulty*
109	1 0 9	3	3	1.0
300	3 00	3	2	.67
2083	2 0 8 ' 3	4	5	1.25

Computing Problem Difficulty. The difficulty of a problem is computed by adding together the digit count of each number in the problem and dividing the total digit count into the total row count which is found by adding together the row count of each number involved. Therefore, if a problem has a total digit count of 60 and a total row count of 70, the problem difficulty would be 1.17 (70 ÷ 60).

Standards of Performance

The current standards of performance for straight ten-key keyboard touch operation as indicated here were developed after training and measuring the skills of over

3000 operators. Each measuring test contained 20 three-digit numbers with the average difficulty rating of 1.0. Operators were requested to enter numbers into the machine for a period of one minute. At the end of the testing period, operators computed the total lines entered, the number of incorrect lines entered, and the number of correct lines entered. From these figures, the gross and net operative units a minute scores were obtained by multiplying the number of lines by the number of operative units per line. For example, if an operator entered 30 three-digit numbers during the one-minute examination, he had operated the ten-key keyboard machine at the rate of 150 operative units a minute (30 lines $\times$ 5 ouam) on material of 1.0 difficulty.

Operator Classification	*Net Operative Units a Minute* (Difficulty 1.0)
Average Touch Operator	100-175 (20-35 three-digit numbers)
Above-Average Touch Operator	176-250 (36-50 three-digit numbers)
Superior Touch Operator	251 or more (51 + three-digit numbers)

In February 1959, a major banking firm in Baltimore, Ohio, installed an intensive ten-key touch training program for new employees. The trainees were evaluated according to the standards mentioned above. In September 1959, the banking firm reported the following results obtained through the use of an intensive training program with consistent performance standards.

Previous Procedures. Hire operators, give basic ten-key touch training over an extensive period of time, place employee on job, and make an evaluation of production at the end of a six-month period as basis for retaining or releasing.

Current Procedures. Hire operators, give intensive ten-key touch training for shorter period of time, and make the decision about operator's potential ability at the end of two weeks based upon set standards of performance.

Results Obtained. Operators with poor potential were eliminated at the end of the second week. Operators who were retained performed on the job with high skill. Previous costs for the slow production and numerous errors made by inefficient operators over a six-month period were eliminated. Over-all production rates were increased by 138 items an hour and errors dropped from 1 for every 300 entries to 1 for every 705 entries.

Standards Required. At the end of two weeks, operators were required to enter 250 or more operative units a minute on three-digit test material of 1.0 difficulty. Over the two-week training period, operators were required to display high accuracy tendencies on daily tests.

Standards of Production

Beyond the development of standards of performance for the basic ten-key touch operating skill, it is difficult to set down specific standards of production since ten-key adding machine activities vary widely in the office. One operator may be working with small numbers from checks; another may be required to perform a second operation, such as filing the checks after the addition process; and another may be required to operate the adding machine as a minor part of the total office activity.

Companies requiring specific standards of production have evaluated each particular activity and have set standards accordingly. For example, one firm requires that proof machine operators employed for a period of one year clear 1200 checks an hour with 1100 checks cleared per error. The operation requires the operator to read hand-written numbers on checks, enter the amount on the ten-key keyboard, select a key from a second keyboard for filing purposes, and place the check in a slot. The standard of production would be considerably higher if only the addition of the amounts was required.

It is far too expensive to measure operators on production results alone. Evaluation must come during the early stages so that operators lacking in basic touch ability may be directed to other activities. Production standards must be maintained for each ten-key adding machine activity to insure continuous peak operator performance. In many instances, production standards should be increased when intensive touch training is incorporated into the training program.

Balsley

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standard for punched tape "typewriting." Firm C listed 70-75 WAM on an electric wire transmitter as the standard that had been set upon the basis of average daily output. Only one firm, Firm B, gave a standard for claim adjustment: std. min./ticket, .2096; output/hour, 17.4. This standard was based on the standard minute of .0070 a stroke.

The many problems in a work measurement program expressed or implied in the preceding discussion show why a relatively small percentage of business firms have set up definite standards for office operations involving the use of a typewriter. Even the most routine of operations presents problems in measurement. There are many detailed elements to each operation, there are interruptions, there may be only a small volume of work of a particular type, and there may be only one or two employees performing certain operations. Only repetitive operations can be measured with exactness, and the work in some job classifications just does not lend itself to measurement.

It is doubtful that a uniform set of standards can be developed for all business firms even within one classification of product or service because most office operations, though similar basically, differ widely in detail from firm to firm. A work measurement program can be very worthwhile to the individual firm in setting standards for its own employees, and teachers can learn much of value to them through studying work measurement data and standards of various firms.


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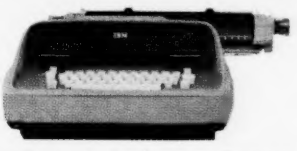

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UNITED SERVICES

OCCUPATIONAL INFORMATION

PAUL S. LOMAX, Editor
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SUPPLY AND DEMAND FOR WORKERS IN DISTRIBUTIVE OCCUPATIONS

Contributed by **JOHN A. BEAUMONT**
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The term "distributive occupation" does not lend itself readily to definition. Thus it becomes difficult to substantiate with statistics the supply and demand trends in this particular field.

Distributive occupations are defined by the U. S. Office of Education, Vocational Division, as "those followed by proprietors, managers, or employees engaged primarily in marketing or merchandising goods or services. Such occupations may be found in various business establishments, including, without being limited to, retailing, wholesaling, manufacturing, storing, transporting, financing, and risk bearing." This definition, while it is specific in a certain sense, also implies the problem that lies in defining a distributive occupation. This problem is basically that distribution is a function which appears to a greater or lesser extent in a wide range of occupations. For example, in manufacturing there are those who are engaged in industrial sales, which is definitely a distributive occupation. Particularly in small manufacturing, there are proprietors and managers, one of whose primary functions may be in the field of distribution. There are many other illustrations where the function of distribution is primary, but is not the total activity of the individual.

In securing statistics relative to employment at a national level, there appear to be two basic approaches: (a) occupational distribution, and (b) industrial distribution. In occupational distribution the following classifications are frequently found:

Professional and technical	Operatives (semi-skilled)
Proprietors and managers	Service workers
Clerical and sales	Laborers
Craftsmen (skilled)	Farmers and farm workers

These are major occupational groups which have been set up for securing various employment statistics. Here again we see the difficulty of securing definite information regarding distributive occupations.

In industrial distribution we normally find the following major industries listed for securing statistical information:

Manufacturing	Wholesale and Retail Trade
Construction	Communication
Mining	Other Public Utilities
Agriculture	Government Service
Transportation	Private Service and Misc.
Finance, Insurance, and Real Estate	

One could readily assume that the large majority of those engaged in the wholesale and retail trade were in distributive occupations; but this is only a part of the group, for distributive occupations appear in the production industry and also in many of the service industries.

In a report issued by the U. S. Department of Labor "Our Manpower Future—1955-65," it is projected that the total population in the United States will rise to 190 million by 1965, and the gross national product will reach $560 billion. Included in this report is a chart which indicates the anticipated changes in the occupational structure of the labor force in 1965. This chart envisions a 33⅓ percent increase in the number of professional and technical workers, a 20 percent increase in proprietors and managers, a 25 percent increase in clerical and sales occupations, a 25 percent increase in craftsmen, a 20 percent increase in operatives, a 15 percent increase in service workers, a 5 percent increase in laborers, and a 15 percent increase in farmers and farm workers. This projection again illustrates the point that those occupational groups, including distributive occupations and the distributive function, are the areas in which increased employment may be expected.

The supply of workers is of course conditioned by many factors, including birth rate and economic condi-

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ZENOBIA T. LILES, Editor
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MANPOWER'S TESTING PROGRAM

Contributed by **JOSEPH C. WHITAKER**
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Manpower, Incorporated, which is an employment agency supplying part-time office workers to complete jobs of a temporary nature and to fill in when regular employees are absent, tests hundreds of applicants. The typical employees are housewives who object to the rules and regulations of a permanent job; they want to work a few hours a day or a few days each week to supplement their husbands' incomes. Employees can work as many hours as they choose; and if they do not want to work, they may refuse any assignment. The only requirement is that they complete all assignments that are accepted. A testing program used to select part-time employees for a variety of business firms and situations must be quite flexible.

Due to the large number of vacation replacements, requests for part-time office help reaches its peak during the summer months. Many thousands of teachers and students are hired to fill these short-term vacancies, each of whom must be tested.

Testing and Standards. During the last five years the Atlanta office has given several thousand shorthand and typewriting tests. Because of the large number that are given, the tests must be simple; they must also give an accurate picture of the applicant's ability.

Various types of tests have been used, including some that have been developed in Manpower's own office. At the present time, a five-minute straight-copy typewriting test is being used, in which the applicant types from straight-copy material for five minutes. The number at the end of the last typed line is the applicant's speed, and the errors are recorded separately. Applicants are rated in terms of both speed and accuracy. For the most part, a minimum of 50 words a minute is required for referral to a position requiring chiefly typewriting. The type of job, however, determines the qualifications of the person sent. If a request is received for someone whose duties will be primarily filing but who must type some file labels, a person who types less than 50 words a minute is sent.

One-minute shorthand tests are used. This gives an opportunity to observe the applicant's job performance and also to measure the applicant's ability. Recently, the Atlanta office has experimented with various types of graded dictation because personal dictation varies in speed and difficulty; and the correlation of results does not always give a true indication of each applicant's ability. Also, many applicants are nervous and are not able to perform at their top speed.

Many standard shorthand test records are available. Most of the records have some general instructions which are followed by a practice period before the actual test begins. Then, a series of tests are given at three speeds—80, 100, and 120 words a minute. These tests insure that each applicant is tested at exactly the same speed; therefore, the test results of all applicants are comparable.

The contributor has designed a test on a tape recorder that is similar to the records described above. It is almost completely a "self-administering" test, and it also has the added advantage in that each applicant's ability to follow instructions can be tested.

It begins by welcoming the applicant to the Atlanta office, and then it explains briefly Manpower's operations; information is given on how to handle the test materials, for example, "The paper is in the right-hand drawer." The applicant is directed to transcribe only one of the three takes: 80 WAM, 100 WAM, or 120 WAM. She is requested to transcribe the highest take she believes she is able to complete fairly accurately.

Transcripts are evaluated in terms of the total number of errors made; the only type of error counted is incorrect, added, or left out words. Spelling is given a separate evaluation such as, "weak in spelling" or "spelling perfect," and so on. Therefore, at any particular rate for instance, 100 WAM, applicants are compared in terms of the errors made on the transcript. Those displaying the highest speed and the greatest degree of accuracy are assigned to the most responsible positions. No applicant is considered who cannot take dictation at a minimum of 80 words a minute and who cannot transcribe with reasonable accuracy.

It is surprising to observe the ability or the lack of ability of the students who have "completed" business education programs. Recently, we had an applicant who had just completed high school; she could take dictation at 120 words a minute and could typewrite at the rate of 90 words a minute, which is the highest speed ever achieved on our typewriting test. However, one of her classmates took the same examination and she was unable to take dictation at 60 words a minute or to typewrite at 30 words a minute.

Because of individual differences, employment agencies must test and screen all applicants regardless of their educational background and their professed abilities. This is necessary to protect the reputation of the recommending agency, as well as to be sure that the applicant can fill the needs of the employer.

ARNOLD CONDON, Editor
University of Illinois, Urbana

REALISTIC STANDARDS FOR BEGINNING TYPEWRITING

Contributed by **CLEO P. CASADY**
and **WILLIAM J. MASSON**
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Typewriting is a skill with many uses. It is the exception among present-day high school graduates to find a student who has not had at least a minimum of instruction in typewriting. A good skill in typewriting is basic for any student preparing for office employment, and every student, regardless of his post-high school plans, has many uses for a good skill in typewriting.

Basic Skill Is a Must. There is no substitute for a high level of typewriting skill for the student who plans to make use of his ability to typewrite. A quarter of a century ago when typewriting for "personal use" was beginning to be recognized, the popular opinion was that the student with only a personal-use interest in typewriting did not need the same level of skill as the vocational student. One idea for determining the skill required for the personal-use student was to use the usual longhand rate of writing as a basis. Most students can write in longhand at about 25 words a minute, so the idea was accepted that if the student could develop a typewriting rate of at least 20 or 25 words a minute, the skill would be useful to him. At least he could typewrite as fast as he could write in longhand, and the legibility and appearance of his work would be measurably better.

The result of this reasoning was reflected in one-semester courses in "personal typewriting." In many schools these students were taught in separate sections from the regular typewriting course. After a brief period for introducing the keyboard, much of the remaining time was spent in teaching applications of the embryonic skill to personal letters, term papers and reports, outlines, and the typewriting of recipes. The net result in most cases was a mediocre typewriting skill and typewriters filled with eraser dust from the attempts of students to produce usable applications of a typewriting skill they had neither the time nor instruction to develop.

Importance of Timed Writings. There is no substitute for the right kind of practice and for frequent timed writings to let the student know how his typewriting skill is developing. Personal records are important to make the student aware of his own typewriting progress. In addition to the motivation that each student can realize from knowing his own progress, he needs to be able to evaluate his own performance in terms of a standard that will let him know whether his progress should be considered excellent, average, or below average.

A study has been undertaken at the State University of Iowa for the purpose of determining the speed and accuracy scores of first-year typewriting students. This study was started in 1952, and has been continued to the present time. The number of participating teachers, and the number of students included in the study, have increased each year.

Copy was sent every six weeks to each of the participating teachers throughout the state. The teachers gave two timings on the unfamiliar copy and reported the better writing of each student. These results were summarized for each six-week period. Condensed summaries for two periods are given in Table 1 and Table 2.

TABLE 1.—ACHIEVEMENT SUMMARY OF 2200 BEGINNING TYPISTS AT THE END OF 18 WEEKS [a]

Speed Scale			Accuracy Scale		
Percent	NWAM	*Grade*	*Percent*	*Errors*	*Grade*
Top 7	37-62	A	Top 7	0-1	A
Next 24	26-36	B	Next 24	2-4	B
Mid 38	15-25	C	Mid 38	5-7	C
Next 24	3-14	D	Next 24	8-13	D
Low 7	0-2	F	Low 7	14-up	F

[a] Students were given two 5-minute timings on identical copy which had a syllabic intensity of 1.30. The better writing of each student was recorded in net words a minute. Median speed: 21 NWAM; median errors: 5 in 5 minutes.

Table 1 shows that 31 percent of the typists were typing less than 15 net words a minute at the end of the first semester. Is this a usable skill? One-half of the students were typing only 21 net words a minute or less. Is this speed adequate, even for personal use?

TABLE 2.—ACHIEVEMENT SUMMARY OF 1800 BEGINNING TYPISTS AT THE END OF 36 WEEKS [a]

Speed Scale			Accuracy Scale		
Percent	NWAM	*Grade*	*Percent*	*Errors*	*Grade*
Top 7	51-79	A	Top 7	0-1	A
Next 24	39-50	B	Next 24	2-4	B
Mid 38	27-38	C	Mid 38	5-7	C
Next 24	14-26	D	Next 24	8-13	D
Low 7	0-13	F	Low 7	14-up	F

[a] Students were given two 5-minute timings on identical copy which had a syllabic intensity of 1.40. The better writing of each student was recorded in net words a minute. Median speed: 33 NWAM; median errors: 5 in 5 minutes.

Table 2 shows that one-half of the typists were writing only 33 net words a minute or less at the end of one

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R. NORVAL GARRETT, Editor
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OBJECTIVES OF THE BOOKKEEPING COURSE

Contributed by M. L. LANDRUM
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The objectives of the modern bookkeeping class may be many and varied. The teacher may have one group of objectives, and the students may have another.

The wise teacher might do well to discover or *uncover,* if he can, the reasons or objectives of each student who is enrolled in the bookkeeping class. Could it be possible that some students enrolled for a passing grade and a unit of credit or that some enrolled because they like the teacher? Business teachers with an attractive personality and an interest in student progress—not to mention the desire to help students—naturally promote good guidance and encourage students to achieve self-satisfying goals. These qualities play an important part in the future of the students.

It would be desirable for teachers to evaluate, from time to time, the results of the classroom experiences. Do the experiences that students have in class:

1. Inspire them to attend college?
2. Inspire them to become successful business teachers?
3. Encourage them to become small business operators?

Or, do their classroom experiences:

1. Encourage students to memorize each chapter temporarily in order to pass a test?
2. Guide them out of the business curricula forever?
3. Cause them to make the final decision to drop out of school?

The wise teacher will lead the students, without their realizing it, toward the most important constructive objectives of the course. They are as follows:

1. Bookkeeping for vocational and prevocational education, including bookkeeping as preparation for the operation of a small business
2. Bookkeeping as general education and for personal use
3. Bookkeeping as preparation for college
4. Bookkeeping to help students decide whether or not they desire to continue with it in high school and in college. This is called the guidance objective.

Vocational or Prevocational. First and foremost, the primary goal of the subject of bookkeeping must be vocational or, to say the least, prevocational. The study of bookkeeping should prepare young people for employment in business. The positions as general clerk, bookkeeper, and accountant are highly respected vocations. Bookkeeping teachers should encourage each student who shows interest and aptitude in the subject to prepare for the highest type of position for which he may be able to qualify.

The subject of bookkeeping is necessary for those who plan to engage in the operation of a small business: service station, store, farm, restaurant, laundry, dry cleaning, or beauty shop. The Federal government requires all business organizations to keep accurate records. Then, too, the lack of proper records or inability to analyze good records may cause business failures.

An adequate knowledge of bookkeeping enables the businessman to "pinpoint" the leaks and inefficiencies. This will aid in preventing business failure.

It is recognized that the vocational content may need to be revised to meet current business needs. Also, there is the possibility that some topics of the bookkeeping course may be re-emphasized or taught more effectively by presenting them in some subject. For example, the foundation for social security, federal withholding and state taxes may be taught in the bookkeeping class. Then, actual problems in the use of payroll sheets involving those taxes and additional deductions may be included in the content of the office practice class.

General Education and Personal Use. Everyone lives in a business society. Needless to say, our business society is regulated by laws that affect everyone. Many of those laws relate to the keeping of records of such things as hours of employment, remuneration, social security taxes, income and property taxes, and others.

Every home is a small business unit. In these days of inflation and high taxes, it is very helpful to keep records of income, expenditures, and savings. It appears that a knowledge of the things that affect everyone's personal life would be helpful to all.

Even the most simple business transaction must be on the records of some business. Each person who purchases something—groceries, a pair of shoes, a dinner, or anything—starts a chain of bookkeeping entries.

Even the most competent teachers never know *where* or *how* their students are going to use the things that they learned while they were in their bookkeeping classes.

After graduation, the former bookkeeping student may use some of the bookkeeping content as a layman. He may keep records for the church, a club, lodge, or the Boy Scouts. In the course of casual conversation with fellow laymen, he may use such words as assets, liabilities, social security, and income tax. Those terms have now become lay language. Everyone must know the meaning of those terms if they are to have common understandings in our present-day society.

Therefore, it appears that the subject of bookkeeping provides more general education than many of the "so-

called'' solid academic subjects which now have the general education label.

While the most important objective of the bookkeeping course may be vocational or, to say the least, prevocational, the subject is also packed with general education—the kinds of things that all people must know in order to live in our present-day business society. It appears that this subject is one of the best general education subjects that can be offered in any program.

College Preparation. It is evident that some high school bookkeeping teachers have overlooked the fact that they may have students in their classes who plan to attend college. Perhaps, some students upon entering the class had not thought of the possibility of furthering their education beyond high school.

In many states, the only requirement for entrance to a state college is graduation from high school with a good record. If the student has credit in bookkeeping in his total of 16 units, that would indicate that credits earned in bookkeeping can be used toward meeting the requirements for college entrance.

Therefore, it appears that bookkeeping teachers should take advantage of each opportunity to encourage intelligent young people who are in their classes to attend college. Many professional accountants, certified public accountants, comptrollers, professional tax consultants, and successful businessmen were started on the road to success by their high school bookkeeping teachers.

Guidance Objective. Many bookkeeping teachers may not realize that the guidance function is in full operation in their bookkeeping classes each day. To be sure, the guidance may not be direct, but it is operating indirectly at all times. Some students may be experiencing one success after another, while others may be having some difficulties with the subject. Naturally, it is the duty of each teacher to see to it that all students experience as much success as possible.

In this way, the students will be deciding whether or not bookkeeping is for them. Some will be deciding to elect another year of bookkeeping or to attend college and prepare for higher types of positions. Others may be deciding to become business teachers. Still others may be dreaming of the day when they can operate their own businesses. However, there may be some, and we hope that the number is small, who find the subject full of drudgery and look forward to the day when they will never have to attend another bookkeeping class.

The good bookkeeping teacher will lose no opportunity to give proper guidance, both directly and indirectly, throughout the entire course. Teachers never know which of their students are the future business teachers and the ''Future Business Leaders of America.'' It has often been observed that quite frequently some who appeared to be slow learners in school have commanded highly responsible positions of leadership in later years.

Naturally, all of the objectives operate simultaneously. It is not desirable to spend a separate block of time on the vocational aspects of bookkeeping, another block of time on the general educational and personal-use objectives, and another on bookkeeping as a college preparatory subject. Instead, the master teacher will be fully aware that all of the objectives will be operating in varying degrees, and at the same time, throughout the course.

Occupational Information

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tions. For the ten-year period ending in 1965, while the population will increase, the number of individuals in the age group 25-44 will decrease considerably over the preceding 10-year period, due to the low birth rate in the 30's. Thus with the expanding economy, particularly in the service industries and with the anticipated increase in occupational areas in which the distributive occupations predominate, it can be expected that there will be a tight labor market in the field of distribution, particularly in the high producing group between the ages of 25-44.

At the 1959 Boston Conference on Distribution the report was made that 500,000 new employees were needed each year in retailing to provide for expansion and replacement. Further, it was reported that there had been a 42 percent increase in supervisory positions in department stores in the past decade. These comments tend to substantiate the basic premise that there should be an excellent opportunity during the next few years for individuals who are interested in careers in distribution. These individuals should also be able to anticipate a wide range of growing opportunities with the further added incentive of excellent possibilities for rapid advancement.

Typewriting

(*Continued from page* 25)

year. Are these typists of much real value to businessmen? Are they the ones you would choose to work for you?

Although these tables show the results for one year, records of additional thousands of typists substantiate the statement that, ''These are realistic standards of typewriting achievement.''

Only one-half of the students who take typewriting achieve a really usable personal-use skill in typewriting at the end of one semester of instruction. Until teaching techniques or equipment or both are greatly improved, the suggestion that one semester of typewriting is enough for personal use is questionable.

Is a typist who nets less than 33 words a minute ready for a position as a typist? Yet, one-half of the typists could not do better on unfamiliar material at the end of one year.

Therefore, it is important that the teacher motivate his typists to develop as high a level of skill as possible. Realistic standards, properly used, can do yeoman service.

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ECONOMIC GEOGRAPHY À LA MODE

Contributed by **BILL G. RAINEY**
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Economic geography is one course in the business curriculum which lends itself to many worthwhile projects. A highly motivating, and exceptionally interesting one is described in the paragraphs that follow. As a most appreciative fan of the culinary arts and of the cuisine, this project is referred to as "serving economic geography à la mode" because it provides the students and the instructor with a pleasant feeling of a worthwhile project effectively and efficiently carried to completion.

The teacher can have the class prepare an economic-geographic history of the county (or area) in which the school is located, complete with maps, illustrations, statistical tables, and so on. The completed history can then be mimeographed and bound. In addition to the copies for the class, other copies can be sold to students, parents, and the public as a fund-raising activity.

Several periods should be spent in conditioning the students for the project before assignments are given. Time spent in developing student interest and motivation will not be wasted. Once the students are motivated, the class can be divided into groups or committees and special assignments and procedural instructions given.

The type of economy and the characteristics of the particular county or region of the school will determine the exact outline the teacher will want to use. The following outline is offered as an illustration. The subheadings under the major divisions would be developed by the students as they proceed to write the chapter.

A Short Economic-Geographic History of Anywhere, U. S. A.

1. Early Exploration and Settlement
2. Climate, Topography
3. Flora and Fauna
4. An Overview of the County's Economy
5. Agriculture and Agricultural Products
6. Livestock Raising
7. Mining and Mineral Resources
8. Manufacturing Industries
9. Retailing, Service, Wholesaling, and Related Business
10. Communication, Transportation Industries
11. General Employment: Past, Present, Future
12. Water Resources, Recreational Areas, Commercial Hunting and Fishing
13. Biographies of Outstanding People in the Economic Development of the County
14. Geography of Selected Industries
15. Selected Bibliography of Books and Articles Related to the History and Economic Development of the County

Students can be assigned to one or more committees, depending on the size of the class. Each committee should then be given responsibility for one of the contemplated chapters. The number of students assigned to each committee will be determined by the importance and length of the chapter.

A typewriting and mimeographing committee, an editing committee, and a special committee to handle the maps and illustrations can be created if desired as special committees by the class.

This project should be extended over several months. During this time the various committees can meet periodically to carry on their work and the instructor can meet from time-to-time with each committee to give suggestions and helpful criticism. The instructor should select the more capable students as committee chairmen and keep in touch with them at all times relative to the committee's progress on its assignment.

The printing of a cover and the binding might be done by a commercial printer at a reasonable fee. The book will probably not make the list of best sellers and it may not even be fought over by various publishing houses. The project will be a stimulating experience for the class and the book will be a "best seller" among the students, parents, and friends of the school. In fact, if it is really good, the local Chamber of Commerce and other civic groups may make good use of it in their public relations.

In the event that you plan to try this idea but must first secure the approval of certain administrative officials in the school, here are a few advantages which can be presented in justification of the project:

1. Students learn early how to obtain information
2. Students learn to take notes, conduct interviews, meet and talk with people
3. Students learn to work together in committees
4. Students become aware of the necessity for knowing and using correct grammar, punctuation, and spelling, and some students become interested in writing to the extent that their interest in English and journalism picks up
5. The project is related to other business courses in that students handle the advertising, selling, typewriting, collections, disbursements, and public relations work
6. It is good public relations for the school and for the business department
7. The book can be sold at an attractive profit which will provide money for various activities (field trips, and departmental aids)
8. Students learn more about their own community and surrounding area
9. A closer student-teacher relationship is formed than would otherwise be found
10. It helps students to see the relationship of geography, economics, and history.

ALVIN C. BECKETT, Editor
San Jose State College, San Jose, California

MAKING YOUR DISTRIBUTIVE EDUCATION TEACHING CLICK

Contributed by **WILLIAM S. BENNETT**
Artesia High School, Artesia, New Mexico

Have you ever travelled on a bus, in an automobile, or via some other type of conveyance and viewed a very interesting place with the thought, "What a wonderful idea this would be for me to capture and bring back to my classes!" Experiences can be captured and brought into classrooms, lecture halls, or other areas in this advanced age of photography, inexpensive cameras, and fantastically fast films. A teacher possessing a little ingenuity can develop an idea into an effective teaching device through the use of photography.

Distributive education teachers in New Mexico have used colored slides as a means of disseminating information about this field of study for a number of years. The history of this mode of information in New Mexico is traceable to William B. Runge, state supervisor of distributive education in New Mexico, who, when confronted with a lack of suitable visual material to present to civic groups, state department authorities, coordinators, and students, initiated the development of such materials. Today, the camera is practically indispensable to the coordinator in New Mexico. Through the combined efforts of these coordinators, one of the finest collections of colored slides in the nation directly related to the area of distributive education are now a part of the program in New Mexico.

Camera. What is the first step in the development of a pictorial story for distributive education or any other field of educational endeavor? Quite obviously, a camera is an absolute necessity. Professional photographers, suppliers of photography supplies, or those who have had previous experience with cameras of this type should be consulted before a purchase is made. There are many good cameras priced under $100 on the current market.

What is the next step after the camera is acquired? An investigation of the types of film available will control to a great measure success achieved with the camera. Experiences in New Mexico have taught that excellent results are achieved with Kodachrome for this film gives true color, is reliable, and after its limitations are known it will then give consistently good results.

Careful attention should be given to the purchase of complementary equipment. A word of caution to the beginner: be circumspect in your purchase for it is far too easy for an avid photographer to spend an excessive amount of money for innumerable materials never needed. Minimum essentials include: the basic camera, flash attachment, and a copying device (for books, magazines, and charts to supplement incidents from actual life situations). At this point you are ready to develop the story you want to tell.

As an example, the first endeavor on a state level was to develop a pictorial story that would tell what distributive education really is. Such an approach was considered especially effective for presentation to prospective students, the PTA, teacher groups, and civic groups. If distributive education is new in an area, as it was in much of New Mexico, a great deal of publicity must be given to the program. Distributive education must be presented to the public in a convincing manner. One way to convince curious people is to prepare slides utilizing distributive education students as evidence. In this case, pictures were taken of a student participating in class activities, studying for the job, and performing on the job. These pictures showed him doing the job activities that prepared him for immediate employment upon graduation. The camera observed him in club activities on the local and state levels. The pictures followed him into a state contest and then in competition on the national level. Thus, the fact that distributive education reaches far was proved through the medium of such a story told graphically.

Success Story. Another good approach is the success story. A series of pictures showing a distributive education student who has obtained and succeeded in a job illustrates the true value of the program. Picture incidents are available to those who look for them. They are always on hand to greet viewers whether the individual whose case history is being considered is available or not. Such publicity details what distributive education can do for its enrollees.

A word or two is in order concerning the projector and screen needed for an effective presentation. Although a 300 or 500 watt projector may be adequate for some presentations, a 750 or 1000 watt projector would be even more satisfactory for it assures sufficient wattage to show colored slides in any size hall. Similarly, a 52" x 70" screen is best for viewing from most distances.

The story must be told in such a manner that the audience will watch the presentation enthusiastically. Sometimes a tape recorder is most effective. When the narrator puts his talk on tape and synchronizes it with the slides for the job to be done automatically, the presentation will always be uniform.

Proper and enthusiastic interest in any subject will be more easily gained by the modern teacher in the modern classroom through the use of photography.

Gregg Award Committee Announced

Nominations for the 1960 John Robert Gregg Award are now being received. Those who wish to make nominations should write for an official nomination blank to Milo O. Kirkpatrick, King's Business College, 322 Lamar Avenue, Charlotte, North Carolina. The final date on which nominations for the 1960 Award may be received to be considered is July 31, 1960. The recipient of the award is chosen on the basis of outstanding contributions to business education.

Mr. Kirkpatrick has been elected chairman of the Gregg Award Administrative Committee for 1960. Other members of the Committee are Dorothy L. Travis, Central High School and University of North Dakota, Grand Forks; Doris H. Crank, Illinois State Normal University, Normal; F. Kendrick Bangs, University of Colorado, Boulder; Mary Yokum, Austin High School, Austin, Minnesota; and George Anderson, University of Pittsburgh, Pittsburgh, Pennsylvania.

CALENDAR

National Meetings

Future Business Leaders of America, Chicago, Illinois, June 12-14

National Education Association, Los Angeles, California, June 26-July 1 (UBEA meeting, June 29)

National Association for Business Teacher Education, Chicago, Illinois, February 23-25

UBEA Research Foundation, Chicago, Illinois, February 23-25

Administrators Division of UBEA, Chicago, February 23-25

U. S. Chapter of the International Society for Business Education (International Division of UBEA), Chicago, Illinois, February 23-25

Regional Meetings

Mountain-Plains Business Education Association, Denver, Colorado, June 17-19

Eastern Region Invitational Conference, New York City, October 7-8

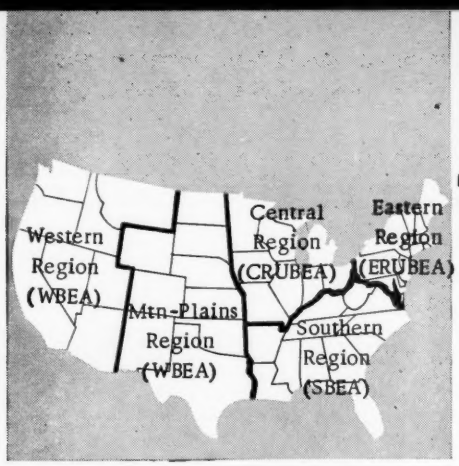
Southern Business Education Association, Atlanta, Georgia, November 24-26

May Meetings

Chicago Area Business Educators Association, May 28

Connecticut Business Educators' Association, Storrs, May 14

Philadelphia Business Teachers Association, May 23



ubea | NATIONAL, REGIONAL, AND AFFILIATED ASSOCIATIONS

The announcements of meetings, presentation of officers, and news of special projects of the United Business Education Association, UBEA Divisions, unified regional associations, and the affiliated state and local associations are presented in this section of BUSINESS EDUCATION FORUM. UBEA is a Department of the National Education Association. The UBEA unified regional associations are autonomous groups operating within the framework of the national organization; each unified association is represented by its president at meetings of the UBEA Executive Board. Affiliated state and local associations cooperate with UBEA in promoting better business education; each affiliated association has proportional representation in the UBEA Representative Assembly.

Summer Workshop

Plans are nearing completion for a three-week National Workshop for Business Education teachers to be jointly sponsored by the Joint Council on Economic Education, the Young Presidents Foundation, and the United Business Education Association. The Workshop will be held August 14 through September 1 at Montclair (New Jersey) State College. Milton C. Olson, State University, College of Education at Albany, New York; and Theodore Yerian, Oregon State College, Corvallis, have been named UBEA directors for the workshop.

In general, the successful organizational pattern used at the National Science-Economics Workshop (Summer 1958) will be followed. Teams consisting of two high school business education teachers and a professor of business education from specifically designated geographical areas will be invited. There will be a total of 60 participants, each of whom will receive a fellowship covering travel, room, board and instructional costs.

The final reports of the teacher-teams will be incorporated in a publication which will be prepared by the Joint Council on Economic Education and the United Business Education Association to serve as a guide for business education teachers throughout the country.

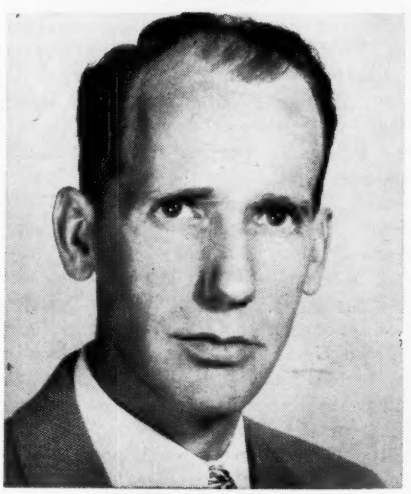
Conference Committee Announced

Lucy Medeiros, chairman of the Governing Board of the Eastern Region of UBEA, has announced the appointment of Donald Mulkerne, State University, College of Education at Albany; James Brown, University of Maryland; Louis Nanassy, Montclair State College; and Mary Ellen Oliverio, Teachers College, Columbia University, to the committee planning the First Invitational Conference to be sponsored by the Eastern Region of UBEA. The conference theme is "Working Toward Balance in the Business Education Curriculum." October 7-8, 1960 has been selected as the date for the conference. This date will make possible the release of the conference report early in the school year.

UBEA Officers Elected

Gladys Bahr, New Trier Township High School, Winnetka, Illinois, will become president of the United Business Education Association on June 1, 1960. Miss Bahr succeeds Milton C. Olson, State University, College of Education at Albany, New York. Miss Bahr was a member of the Executive Board in 1946-50, treasurer in 1948-49, basic business editor of the BUSINESS EDUCATION FORUM for seven years, and is currently vice-president of the Association.

GLADYS BAHR



VERNON V. PAYNE

Parker Liles, chairman of the Department of Business Education, Georgia State College of Business Administration, Atlanta, has been elected vice-president of UBEA. Dr. Liles was president of the Administrators Division of UBEA from 1955-59, treasurer of UBEA in 1950, and a member of the UBEA Executive Board in 1947-51. He is now a director of one of the four official scoring centers for the National Business Entrance Tests.

Vernon Payne, chairman of the Department of Business Education and Secretarial Science, North Texas State College, Denton, has been re-elected to the office of treasurer in the Association. Dr. Payne is a past-president of the Mountain-Plains Business Education Association, has been a member of the UBEA Executive Board since 1954, served as general convention chairman for the Centennial Celebration for Business Education (June 1957) sponsored by UBEA, and was a national executive board member of NABTE in 1957-59.

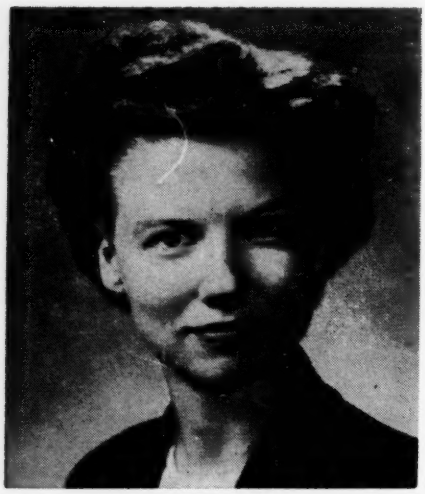
These officers were elected at the annual meeting of the UBEA Executive Board. The Executive Board is composed of 15 members elected by the members of the Association, the presidents of the four UBEA Divisions, the presidents of the UBEA Regional Associations, and the three elected officers of UBEA.

PARKER LILES

Membership Goal Achieved

April 11, 1960, was a real "red-letter" day for the United Business Education Association. It was on this date that the 1959-60 UBEA membership goal of 7700 was surpassed, bringing UBEA membership to an all-time high. Memberships continue to "pour" into the UBEA Headquarters Office in unprecedented numbers and it appears that the momentum will be maintained through the current school year.

Dorothy Hazel, University of Nebraska, Lincoln, has served the Association as national membership chairman for four



DOROTHY HAZEL

years. She relinquishes this office on May 31 and will devote full time to graduate studies at the University of Kentucky in Lexington.

Other key persons on the UBEA membership team include Mearl Guthrie, Bowling Green State University, Bowling Green, Ohio, national student membership chairman; and the following regional membership chairmen: Eastern—Clarence Schwager, Greenwich High School, Greenwich, Connecticut; Southern — Jeffrey Stewart, Jr., Virginia Polytechnic Institute, Blacksburg; Central—Lorraine Missling, Nicolet High School, Milwaukee, Wisconsin; Mountain-Plains — Ralph Reed, Central State College, Edmond, Oklahoma; and Western—Helen Lundstrom, Utah State University, Logan.

Libraries and business subscriptions to BUSINESS EDUCATION FORUM are not included in the membership roster of the United Business Education Association.

White House Conference

UBEA President Milton C. Olson, State University, College of Education at Albany, New York; Richard Clanton, Louisiana State Department of Business Education, Baton Rouge; FBLA President Roy Peters, Alex, Oklahoma; and FBLA Treasurer Jean Gilbert of Baton Rouge, Louisiana, represented UBEA and FBLA at the Golden Anniversary White House Conference on Children and Youth in Washington, D. C., March 27-April 2.

President Eisenhower addressed the opening session of the Conference to which he had invited 7000 citizens of this country and other nations. The delegates came in the interest of promoting "opportunities for children and youth to realize their full potential for a creative life in freedom and dignity."

The format of the Conference included five concurrent theme assemblies, eighteen concurrent forums, and 210 concurrent workgroups. Speakers addressed the assemblies and forums in the mornings and workgroups of approximately 30 persons met on Monday, Tuesday, and Wednesday afternoons to discuss specific problems.

The UBEA-FBLA delegates succeeded in the passage of a resolution concerning

FBLA-UBEA . . . Roy Peters, Jean Gilbert, Richard Clanton, and Milton Olson visited the NEA Center between sessions of the White House Conference. In the lobby they paused at the plaque listing FBLA among the contributors to the NEA Building Fund.

the need for adequate business-economic understanding for all students and sufficient guidance personnel to assist each student in the selection of his program of activities.

Proposals made during the Conference will guide thinking in the areas of education and welfare for the youth of the country throughout the next decade. Lyle Ashby, Deputy Executive Secretary of the NEA, was selected as the chairman of a committee to coordinate follow-up activities of the White House Conference.

Representative Assembly for the Eastern Region

An Eastern Region UBEA Representative Assembly was held on Saturday morning, March 26, with the UBEA president, Milton Olson, presiding.

The agenda consisted of a series of reports and discussion on state associations and UBEA activities. Mary Ellen Oliverio, Lucy Medeiros, Clarence Schwager, Hollis Guy, DeWayne Cuthbertson, and President Olson presented the progress reports for UBEA. Reporting for the affiliated state associations in the Eastern Region were: Connecticut—Mr. Schwager and Jean Skawinski; New Jersey—Louis Nanassy; Rhode Island—Lucy Medeiros; and Maryland—James Brown.

Plans for the first invitational conference sponsored by the Governing Board of the Eastern Region of UBEA were presented by the ERUBEA chairman, Lucy Medeiros. The conference is scheduled for October 7-8, 1960. in New York City. The conference participants will be concerned with the problem of achieving balance in the business education program.

NBET Scoring Centers

The four Official Scoring Centers for the National Business Entrance Tests are swamped with tests from all over the United States and Canada. April, May, and June are the official testing months for the NBETesting Program. Donald Aase, Chico State College, Chico, California; Robert L. Ferguson, Western Illinois State College, Macomb; Thomas K. LeGuern, Dedham High School, Dedham, Massachusetts; and Parker Liles, Georgia State College of Business Administration, Atlanta, are the Scoring Center directors.

The number of applications for Official Testing Centers is increasing steadily and it is anticipated that this year's registration will show a gain of 40 to 50 percent over last year. This means that the Scoring Centers' staffs may be called upon to handle as many as 25,000 tests. The National Business Entrance Tests require one or two hours to administer, depending upon the series used. The Scoring Centers are organized so as to permit rapid scoring of the tests and reporting to the Centers.

Central Region Representative Assembly

An enthusiastic group of approximately 100 persons were in attendance at the UBEA 10,000 Club Breakfast and the Central Region Representative Assembly on March 26 in Springfield, Illinois. James T. Blanford, Iowa State Teachers College, Cedar Falls; Lorraine Missling, Nicolet High School, Milwaukee, Wisconsin; and Arnold Condon, University of Illinois, Urbana; are chairman, vice-chairman, and secretary, respectively, of the Central Region of UBEA.

The agenda for the Representative Assembly included the following items: "Progress Report on the Academically Talented Student Project," Lorraine Missling; "UBEA Publications Program," Arnold Condon and Floyd Crank, University of Illinois, Urbana; "An Affiliate Speaks," Eileen Schutte, Elmwood Park Community High School, Elmwood Park, Illinois; "A Division Speaks—NABTE-UBEA," Russell Hosler, The University of Wisconsin, Madison; "Speaking for FBLA," Robert Stickler, Proviso Township High School, Maywood, Illinois; "UBEA Membership," E. L. Marietta, Michigan State University, East Lansing; "Project with Joint Council on Economic Education—Summer Workshop," Gladys Bahr, New Trier Township High School, Winnetka, Illinois; "The Bonuses of UBEA," Frances Merrill, Drake University, Des Moines, Iowa; and "CRUBEA-UBEA Summary," James Blanford.

Official delegates of the UBEA state and area affiliated associations participating in the Assembly were Ken Hansen, Cedar Falls, Lucille Nash, Waterloo, and Frances Merrill for Iowa; Warren Gardiner, Terre Haute, and Ray Arensman, Evansville, representing Indiana; E. L. Marietta for Michigan; Morgan I. Thomas, Mankato, for Minnesota; Nell Crawford, St. Louis, and Lucas Sterne, Warrensburg for St. Louis Area and Missouri respectively; Stanley Rhodes, Highland Park, and Eileen Schutte for Chicago Area; William Mitchell, Mt. Prospect, Mary Margaret Graham, Skokie, Writesman Long, Blue Mound, Joanne Forker, Carbondale, Cleta Whitacre, Marion, and Ralph Mason, Urbana, for Illinois; and Jean Costello, Milwaukee, for Wisconsin.

The Executive Board for CRUBEA met on Friday night, March 25, to discuss plans for the next school year.

LET'S GO UNITED . . . UBEA 10,000 CLUB

A membership of 10,000 is the goal of the UBEA 10,000 Club. The Club is composed of persons who believe in the important role of UBEA in business education throughout the country and demonstrate this belief by promoting membership among their colleagues in business education. An association is its membership and its program of services. UBEA is made possible by the dues paid in the form of memberships and through the contribution of time and talents of a group of persons who serve as its executive officers, editors, advisers, representatives, and others—the UBEA working force. The names of the persons listed on this page have made a good beginning in their active support of the Association by inviting their colleagues to participate in formulating and realizing a program of action not only for business education but for the total program of education.

EASTERN REGION

CONNECTICUT
- Anna L. Eckersley **(17)**
- Dean R. Malsbary **(5)**
- Clarence Schwager **(3)**

MARYLAND
- Prima Lee Bryson (18)

MASSACHUSETTS
- Bruce Jeffery (4)

NEW JERSEY
- Walter Brower (20)
- Louis C. Nanassy (118)
- May Paine **(3)**

NEW YORK
- Joseph Berardino (3)
- Donald Mulkerne (187)
- Estelle Popham (9)

PENNSYLVANIA
- Duane Belles (5)
- James B. Creasy (3)
- James Gemmell (31)
- Jerre E. Gratz (4)
- Anna J. Hawkins (4)
- Dorothy Jamison (4)
- Thomas Martin (32)
- **Shirley Myers (16)**
- William Reed (5)
- Jack Wanich (5)
- Phyllis Zeigler (3)

PUERTO RICO
- Amalia de Charneco (9)
- Rosa A. deVillaronga **(19)**

RHODE ISLAND
- Harry J. Cunha (4)
- Lucy Medeiros (4)

VERMONT
- Sally Maybury (4)

SOUTHERN REGION

ALABAMA
- Wilson Ashby **(17)**
- Lucille Branscomb (12)
- Evelyn Gulledge (24)
- J. Curtis Hall **(24)**

ARKANSAS
- Ruth Carter (28)
- Carolyn Fletcher **(8)**
- Katherine Green **(15)**
- LeMoyne Smith (7)

FLORIDA
- Frances Bartoszek (4)
- James Crews (5)
- Frank Dame (4)
- C. C. Miller (5)
- John Moorman (12)

GEORGIA
- Milton Chambers (37)
- Zenobia Liles (42)
- Kenneth Roach **(4)**
- S. L. Toumey **(13)**

KENTUCKY
- Vernon Anderson **(11)**
- Phyllis Boehnke **(3)**
- Alice Cox **(19)**
- George H. Ligon (5)
- Mary Anne Martin (5)
- Margaret Moberly (21)
- Vernon Musselman (76)
- Ethel Plock **(6)**
- Eugene Smith (43)

LOUISIANA
- Wilbur Perkins (79)
- Mrs. Preston Ware (3)

MISSISSIPPI
- Frank Herndon **(40)**
- Kathryn Keener (23)
- A. J. Lawrence (3)
- W. A. Reed, Jr. **(4)**
- James Wykle (86)

NORTH CAROLINA
- Mathilde Hardaway **(16)**
- Mary Suggs (34)
- Orus Sutton **(7)**
- William Warren **(8)**

SOUTH CAROLINA
- Cecil Bierley (56)

TENNESSEE
- Leah Grubbs (16)
- Mrs. Ray Kinslow (20)
- George Parker (4)
- George Wagoner (26)
- Theodore Woodward **(12)**

VIRGINIA
- Sara Anderson (16)
- Thelma Chambers **(4)**
- Z. S. Dickerson **(20)**
- Carl Jorgensen **(3)**
- M. L. Landrum **(13)**
- John Overbey (6)
- Jeffrey Stewart **(18)**
- Harold Webb (15)
- Kenneth Zimmer **(3)**

SOUTHERN REGION—(Contd.)

WEST VIRGINIA
- Alberta Anderson (6)
- Nora Coad (10)
- Ruth Jamason **(3)**

CENTRAL REGION

ILLINOIS
- Gladys Bahr (10)
- Arnold Condon (15)
- Jean Risen **(3)**
- Eileen Schutte **(3)**
- Sister M. Therese (4)
- Lewis Toll (3)
- Sheldon Wagner **(4)**
- Leonard West (19)

INDIANA
- H. G. Enterline **(3)**
- Wenona Phelps (13)
- Robert Swanson (18)
- Lois Winey **(3)**

IOWA
- Cleo Casady (54)
- Lloyd Douglas (29)
- W. J. Masson (34)

MICHIGAN
- George Chambers (7)
- George Cooper (3)
- Elwood Layman **(4)**
- E. L. Marietta (4)
- Leslie Whale **(9)**

MINNESOTA
- John A. Dettman **(5)**
- Mary Libera **(3)**
- Ray Price (12)

MISSOURI
- Dale Blackwell (25)

OHIO
- Marguerite Appel (15)
- Mary Canfield **(17)**
- Elizabeth Freel (11)
- Eleanor Gallagher **(3)**
- Mearl Guthrie **(18)**
- Galen Stutsman **(19)**

WISCONSIN
- Leon Hermsen (26)
- Russell J. Hosler **(11)**
- Lorraine Missling (6)
- Sister M. Alexius (4)

MOUNTAIN-PLAINS REGION

COLORADO
- Kendrick Bangs (15)
- Joyce Bower (3)
- John Binnion (9)
- Kenneth Hansen (75)
- Ruth Mitchell (60)
- Ruth Moyer (3)

KANSAS
- Rida Duckwall (12)
- Charline Jeffers (3)
- Winifred Ketch (12)
- Howard Lundquest **(10)**
- M. M. Morosso (4)
- Marcela Mouser (12)
- Lodi Newcomb (15)
- Richard Reicherter **(34)**
- Faye Ricketts (5)
- Raymond D. Russell (10)

NEBRASKA
- Marilyn Berg **(11)**
- Dorothy Hazel **(28)**
- F. W. House (14)
- Margaret Pederson **(5)**

NEW MEXICO
- Eva Glaese (6)

NORTH DAKOTA
- Beulah Bute **(3)**
- Adeline Olson (4)
- John Rowe **(10)**
- Dorothy Travis **(10)**

OKLAHOMA
- Gordon Culver **(105)**
- James Davis, Jr. (35)
- Zoe Davis **(3)**
- Wilma Ernst (23)
- Lloyd Garrison **(18)**
- Veda Gingerich (4)
- Hazel Noland **(4)**
- Gerald Porter **(10)**
- Ralph Reed (71)
- Charles R. Walker (26)

SOUTH DAKOTA
- Hulda V. Barton (7)
- Evelyn Elliott (14)
- Thelma Olson (37)
- Violet Witt **(14)**

TEXAS
- Loyce Adams (4)
- Faborn Etier (25)
- Carlos Hayden **(13)**
- Helen Howard **(13)**
- Alice Ilo (13)
- Marjorie Keaton (3)
- Vernon Payne (39)
- Maxie Lee Work (58)

WYOMING
- James Thompson (43)
- James Zancanella (6)

WESTERN REGION

ARIZONA
- Ralph Asmus (3)
- R. A. Kidwell (71)
- Kenton Ross **(11)**

CALIFORNIA
- Alvin C. Beckett (9)
- Eleanor Brown (3)
- Fred Cook (9)
- Richard Dale (6)
- S. Joseph DeBrum (24)
- McKee Fisk (7)
- Dana Gibson (10)
- Catherine Jones **(21)**
- Denise Joseph **(7)**
- Erwin Keithley (23)
- Ruth Ling (3)
- John Linn **(3)**
- Gerald Maxwell (7)
- Forrest Mayer **(4)**
- Doris McLeod (3)
- Mary J. Onorata (3)
- Robert Place (7)
- Helen Rohrer (10)
- Jasper Sawatzky (6)
- Edwin Swanson (8)
- Willard Thompson (10)
- William L. Winnett (5)
- Jack Yuen (83)

IDAHO
- Helen Johnson (6)

OREGON
- Grace Palmer (55)
- Edith Smith (4)
- Theodore Yerian (39)

UTAH
- Iris Irons **(4)**
- E. C. McGill (50)

WASHINGTON
- Robert Bender (12)
- Frances Brown **(13)**
- Alberta Frerichs **(6)**
- Gil Koller **(14)**
- Eugene Kosy (28)
- Inez Moore (7)
- Harold Palmer (25)

SOUTHERN REGION

North Carolina

The Department of Business Education of the North Carolina Education Association met Friday, March 18, in Asheville. In the absence of the president, Carrie Hickman, the vice-president, Millie Carter, presided.

The following officers were elected for 1960-61: Mrs. Jacob Carter, Albemarle, president; Gayle Clark, Ayden, vice-president; and Jean McArver, Gastonia, secretary-treasurer.

Evelyn Howell Withers brought greetings in behalf of UBEA-SBEA and described briefly the membership service program.

James L. White, Professor of Business Education at East Carolina College, spoke on "Excellence in Business Education: A Five-Year Plan." Basing his talk on a survey of North Carolina business education, he pointed out the strengths and weaknesses in business education in the state and then outlined the following program of action for excellence: The Five-Year Plan includes (a) one hundred strong county units meeting monthly, (b) ten district units meeting at least three times a year, (c) one state association with at least two meetings a year, (d) a North Carolina Business Education Council, and (e) state supervisory services.

(North Carolina has 161 UBEA members —115 percent of 1959-60 goal.)

Mississippi

The spring conference of the Mississippi Business Education Association was held March 25 at the Robert E. Lee Hotel, Jackson. Martin Stegenga, president of the association, presided at the opening session at 9:00 a.m. Theodore Woodward, George Peabody College for Teachers, Nashville, Tennessee, addressed the group on "Recent Trends in Methods of Teaching the Business Subjects."

Following the 11:00 a.m. business session, a luncheon was held with Mabel Baldwin, vice-president of the association, presiding. Joseph A. Greene, Jr., Mississippi Southern College, Hattiesburg, spoke on "Business and Industrial Developments in Mississippi in the Past Decade." Other officers of the association are Jessie Mae Everett, secretary; and James H. Wykle, treasurer.

(Mississippi has 190 UBEA members—108.5 percent of 1959-60 goal.)

CENTRAL REGION

Illinois

The Illinois Business Education Association held a Spring Conference March 25-26, in Springfield. Cleta Whitacre, Marion Community Unit High School, Marion, presided. Featured speakers at the meeting included Leslie J. Whale, Detroit Public Schools, Detroit, Michigan; John A. Pendery, South-Western Publishing Company, Cincinnati, Ohio; and Russell J. Hosler, The University of Wisconsin, Madison. Numerous discussion groups and idea exchanges were conducted throughout the two-day meeting.

(Illinois has 298 UBEA members—110.3 percent of 1959-60 goal.)

WESTERN REGION

Oregon

The 1960 spring convention of the Oregon Business Education Association was held in Portland on March 17 and 18. The guest speaker, Clifford Maser, Dean, School of Business and Technology, Oregon State College, spoke on the "Relationship of Business Education to the Total Curriculum." The subject of automation in school recordkeeping was aptly described and demonstrated by Gaynor Petrequin, principal-elect of Portland Southeast High School. Pupil accounting, course registration, and grade recordkeeping have been reduced to machine work. Mr. Petrequin gave a fine description of how the routine nature of the work can be given over to machine recordkeeping.

The Thursday evening banquet featured Gerald Frank, Chairman of the Governor's Advisory Committee, Oregon Department of Planning and Development. Mr. Frank, an able spokesman for Oregon business, assists the state in securing new industry which might increase Oregon payrolls. He pointed out that teachers can be effective in teaching young people the need for being constantly community minded and for being alert to new opportunities that might help Oregon continue to progress in industrial development.

The annual business meeting on Friday morning was preceded with a breakfast at Portland State College. The chairman of the Research Committee, Sarah Stein, Eastern Oregon College, presented reports on subjects that perplex business teachers pertaining to the length of time necessary to teach shorthand and the recommended length of a course in typewriting, the need for a business education consultant in the State Department of Education, and a thorough discussion of the value and use of teacher aides. There was considerable discussion based upon the Research Committee's findings on each topic. The association recommended that the same procedure be continued for next year's meeting.

Constitutional revisions were adopted which changed the manner of election from voice ballot at the annual convention to a mail ballot in the month of January.

Association officers elected for 1960-61 are Stewart Hopper, president; Grace Palmer, vice-president; Vern Gibbs, treasurer; and Myra Sorenson, secretary. The next executive council meeting is scheduled for June 25 at Oregon State College, Corvallis.

(Oregon has 211 UBEA members—91.7 percent of 1959-60 goal.)

Nevada (Southern)

Newly elected officers of the Southern Nevada Business Education Association are Doreen McAdams, Boulder City, president; Ben Cowan, Basic High School, Henderson, vice-president; Francis O'Leary, Las Vegas, secretary; and Martha King, Boulder City, treasurer. Doreen McAdams was named as delegate to the Western Business Education Association and Gladys White and LaCreta Lopeman were named as alternates.

(Nevada has 22 UBEA members — 110 percent of 1959-60 goal.)

MOUNTAIN-PLAINS REGION

Kansas

The Kansas Business Teachers Association held its spring convention in Hutchinson on April 1-2. The opening session on April 1 was devoted to demonstrations of materials for business education.

Discussion groups were held on April 2 with the vice-president, Helen Trotter, Topeka Highland Park, in charge. The topics considered were (a) Basic Subjects First—Then Skill Subjects, (b) What I Wish I Had Learned in School, and (c) The Business College.

Warren Peterson, president of the Association, presided at the noon luncheon. Eugene L. Swearingen, Dean of the College of Business, Oklahoma State University, Stillwater, was the guest speaker.

(Kansas has 259 UBEA members—86.3 percent of 1959-60 goal.)

FBLA forum

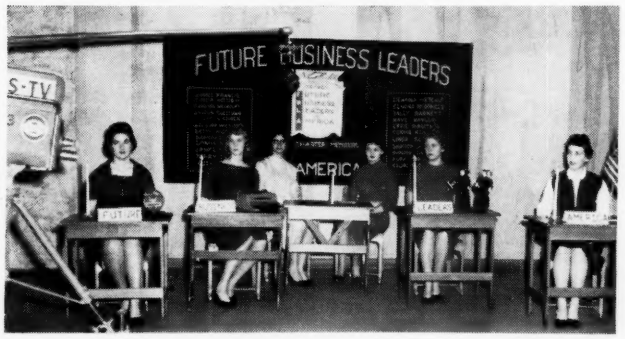
For Sponsors and Advisers of FBLA Chapters

FBLA Projects, Purposes, Public Relations

In addition to fulfilling the major objectives of the organization, FBLA chapters from Alaska to Puerto Rico are demonstrating the useful purpose they serve in the school and community in keeping the lay public as well as the school administrator informed about the work of the business department. It is impossible to present all of the excellent public relations projects here, but some of the more unique and successful projects reported are included as examples of what is taking place.

Phi Beta Lambda Chapter 1805 of FBLA at American River Junior College, Sacramento, California, constructed the FBLA State Chapter exhibit that won first prize for educational exhibits at the 12-day California State Fair and Exposition. FBLA chapter members in the Sacramento area were on duty throughout the fair to greet visitors and discuss with them the purposes of the organization.

FBLA Chapter 1948, Parkview High School, Springfield, Missouri, participated in a television program entitled "Let's Get Down to Business." The various phases of the business education program were demonstrated through the use of office machines and graphic presentations. Some of the reasons for students taking business courses were pointed out throughout the program. The use of some rather complicated office machines as well as the more commonly used typewriter was brought into action in an effort to stimulate the viewer's interest. Good grooming for the office, proper handling of office communications, and other office techniques were illustrated. The FBLA officers (see photo) discussed the role the chapter plays in the school's total business education program.



IN SPRINGFIELD . . . Officers of the Parkview High School FBLA Chapter, Springfield, Missouri, report to their community via TV.

FBLA Chapter 1592, St. Anthony High School, Bristol, Connecticut, continued the yearly pattern of "operating a business for a day," when the members took over operations of the Connecticut Light and Power Company for a day.

IN BRISTOL . . . Members of the St. Anthony High School FBLA Chapter, Bristol, Connecticut, "took over" the operations of the Connecticut Light and Power Company for a day.

Positions filled included company supervisors; cashiers, bookkeepers, clerks, stenographers, and typists in the accounting department; dispatchers, clerks, typists, distribution engineers, and substation operators in the operation department; floor-salesmen; home service representatives; public and employee relations coordinators; and storeroom personnel (see photograph). The project proved to be such a success that the manager of the Bristol district of the utility firm urged other members of the local Chamber of Commerce to undertake similar programs. Numerous news stories and photographs appeared in the local papers. At least a part of the continued success of the program is in the extensive preplanning carried on by the chapter members, sponsors, and executives of the company participating in the program.

FBLA Chapter 1062, Stayton Union High School, Stayton, Oregon, received some worthwhile local publicity as well as experience when they held their annual screening contest for representatives to the state convention at Corvallis. The chapter members found it stimulating to participate in the various events—spelling, public speaking, Mr. and Miss FBLA, projects, and so on. The chapter followed much the same pattern in the competitive events at the local level that is used at the state and national levels to select the winners.

FBLA chapters in Puerto Rico have been "sprouting" everywhere. The first chapter in the Commonwealth was established in September 1958, just 20 months ago. At the present time, there are 20 active chapters in Puerto Rico—an average of one new one each month. The activities carried on in these chapters parallel closely those of the chapters on the mainland.

(*Please turn to next page*)

FBLA Chapter 2194, Anchorage Senior High School, Anchorage, Alaska, is the first FBLA chapter to be chartered in the 49th state. The application was approved on April 8, 1960, with 21 charter members. Dr. Hamden L. Forkner, the founder of FBLA, spoke to the chapter members while in Anchorage to address the meeting of the Alaska Education Association.

Phi Beta Lambda Chapter 4 of FBLA, Iowa State Teachers College, Cedar Falls, is an extremely active group. Among the major activities are the operation of an Official Testing Center for the National Business Entrance Tests and the sponsorship of the FBLA State Convention. Both of these activities provide opportunities for the chapter members to participate in leadership experiences prior to becoming business teachers and FBLA chapter sponsors.

FBLA's State Chapter in West Virginia achieved the ultimate in state recognition, as have some other state chapters, when the state's governor, the Honorable Cecil H. Underwood, issued a proclamation designating April 17-23 as FBLA Week in West Virginia (see photograph).

IN WEST VIRGINIA . . . Witnessing the Honorable Cecil Underwood, Governor of West Virginia, signing the proclamation for FBLA Week in West Virginia are Alberta Anderson, FBLA state chairman and FBLA state officers Eddie Bassitt, treasurer; John Kahle, vice-president; Carol Pell, secretary; and Joyce Derrick, president.

FBLA Chapter 311, J. Sterling Morton High School—East, Cicero, Illinois, won a Gold Merit Award at the Illinois State Convention for a chapter handbook the members compiled and duplicated. The handbook included important chapter dates to remember, the point system for recognition and advancement in degrees, committee duties, general information on the FBLA organization, tips on personal performance, and other items. The publication is used as a supplement to the national FBLA Handbook and as a means of promoting membership.

FBLA chapters in Northern Virginia conduct a work-experience project whereby the chapters earn money and the members gain experience by assisting on Saturdays and holidays in the FBLA and UBEA offices. Chapter members assist in assembling materials, preparing mailings, operating machines, filing, and other office activities. Chapters which have supplied workers are Annandale High School, Falls Church High School, Hammond High School, Wakefield High School, and Washington-Lee High School.

FBLA Chapter 818, George Washington High School, Los Angeles, California, established and operated a successful Career Day. Fifty-one occupations were included in the program. The number of persons participating was so large that several sections for some of the occupational areas were provided in order to accommodate the students. Businessmen served as speakers and consultants for the group.

FBLA's State Chapter in Missouri received glowing reports of their annual convention in the local paper, as have many other state chapters. Roy Peters, Alex, Oklahoma, National FBLA President, addressed the nearly 600 participants at the convention. Numerous clippings from the local newspapers also came in from the Ohio State Chapter convention in Dayton where the Mayor of Dayton proclaimed the days of the convention, "Future Business Leaders of America Days."

Programs of action, such as those described here, prove that FBLA is truly an organization for high school and college students who are preparing themselves as the future leaders of business and business education.

FUTURE BUSINESS LEADERS OF AMERICA
Officers for 1959-60*

President:	ROY PETERS, JR., Southwestern State College, Weatherford, Oklahoma
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Executive Director:	HOLLIS GUY, NEA Educational Center, 1201 Sixteenth Street, N. W., Washington 6, D. C.

*President, Secretary, and Treasurer are elected by state delegates at the National Convention. Vice-Presidents are elected by chapter representatives at the National Convention.

BUSINESS EDUCATION FORUM

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ARTICLES AND CONTRIBUTORS

EDITOR'S NOTE: The index to articles that appear in BUSINESS EDUCATION FORUM is an annual service to members, libraries, and summer session students. The FORUM is owned and published by the members of the United Business Education Association. Articles which appear in the FORUM are approved for publication by the respective editors. Ideas presented by the contributors do not necessarily constitute an endorsement by the publisher unless established by a resolution of the UBEA Executive Board. The FORUM's staff welcomes articles submitted by first-time writers in addition to those solicited from experienced business educators.—*H.P.G.*

FBLA FORUM

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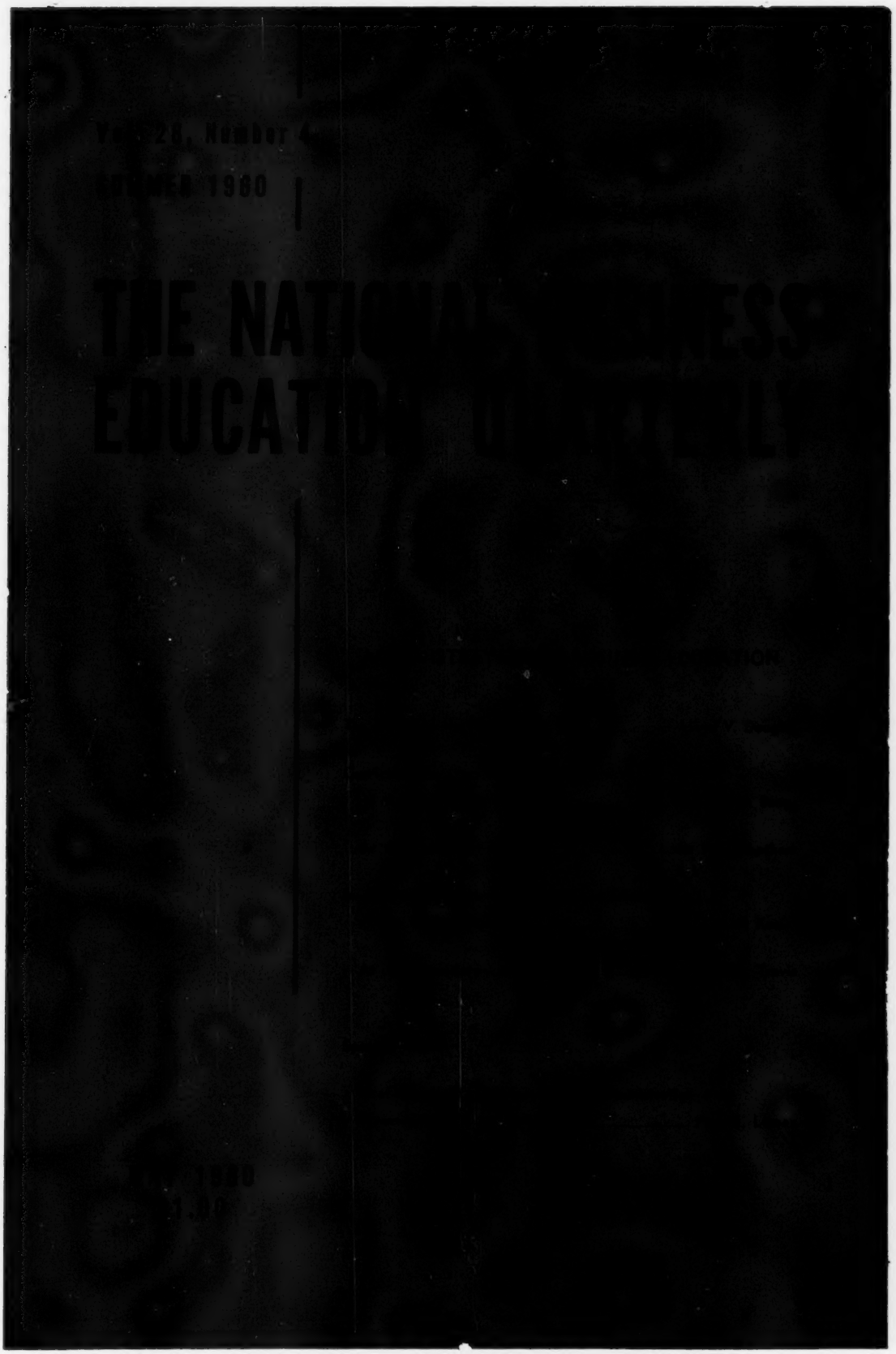

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